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THE METROPOLIS-HINTERLAND THESIS
AND
REGIONAL ECONOMIC DEVELOPMENT

by

© ALICE JANE COLTHART

A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled The Metropolis-Hinterland Thesis and Regional Economic Development submitted by Alice J. Colthart in partial fulfillment of the degree of Master of Arts.

ABSTRACT

This thesis compares two theoretical approaches to regional analysis. The static and dynamic predictions of the neoclassical and metropolis-hinterland frameworks are reviewed. An assessment of the explanations for the initial separation of regions and their continuing differentiation is attempted. Explanations of the growth and decline of regions, and differences in income per capita as a national economy develops are the focal points of the thesis.

The second chapter draws from many neoclassical sources. The elements of neoclassical location and export base theories are basic in the discussion of the initial separation of regions. The development of urban-industrial and rural-staple regions is discussed. Concentration of economic activity and regional income differentials is predictable in the dynamic analysis. Within this chapter, however, an effort is made to go beyond the basic neoclassical adjustment process of factor migration. Adaptation of other traditional theories is utilized to examine not only how some regions grow or decline, but also why opportunities evolve in one region and not another.

The third chapter examines the metropolis-hinterland approach with the same purpose (an assessment of its predictive power concerning regional development) in mind. Regional analysis within this approach requires modification of the normal focus from the international to the intranational

setting, although the former context cannot be ignored. The three following assumptions are most important to the discussion: the expropriation and appropriation of economic surplus from the satellite by the metropole, the polarization of regional economic activity into the underdeveloped satellite and the developed metropole, and the continuity of the monopolistic economic structure of capitalism. The dynamic, regional adaptation predictions of the metropolis-hinterland thesis are central to the analysis, and therefore discussed more thoroughly.

The alternative approaches have obviously different implications for regional development. These differences are alluded to in the third chapter, but are the primary concern of the fourth, and final, chapter. Some of the most important differences in predictions are examined. The explanatory effectiveness of the two models is then evaluated.

The metropolis-hinterland thesis is found to be more useful for our purposes. Surplus, economic power, monopolization of markets, and innovative capacity provide logically consistent explanations for regionalism within one theoretical framework. Whether the neoclassical framework could explicate the observed trends as well cannot be determined until the developments at the frontier of this approach are included in regional analyses. In either case, more theoretical, historical, and quantitative analysis is definitely needed. Thus, even though the present explanatory effectiveness of the metropolis-hinterland thesis makes this approach

appear more promising for our understanding of regional development, the potential of neoclassical analysis in this area is not to be denied.

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TABLE OF CONTENTS

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CHAPTER ONE

INTRODUCTION

CHAPTER ONE

INTRODUCTION

This thesis examines the regional dimensions of national development. The eventual objective of a Canadian economic historian is to explain the historical process of development in Canada. We are particularly interested in one facet of this development, the spatial context. Two major analytical frameworks provide sometimes competing and sometimes complementary explanations of the geographical dimensions of economic activity. These are the neoclassical and the metropolis-hinterland theses. We will evaluate the theoretical arguments of these approaches as a prerequisite to testing the explanatory effectiveness of the competing models.

Our interest in the regional dimensions of national development presupposes the existence of separate regions within the national economy. Several authors have studied the major economic regions within Canada.[1] The Atlantic Provinces, Quebec, Ontario, the Prairies, British Columbia and

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1. See Alan Green, Regional Aspects of Canada's Economic Growth, (University of Toronto Press; Toronto: 1971); S.E. Chérnick, Interregional Disparities in Income (Staff Study No. 14, Economic Council of Canada, Information Canada; Ottawa: December 1964); W.H. MacKintosh, The Economic Background of Dominion Provincial Relations, (McClelland and Stewart Limited; Toronto : 1964; Appendix III of the Rowell-Sirois Report: 1939).

the Territories are often separated for the purpose of analysis. Although this demarcation may be based on historical groupings or statistical convenience, distinctions among these regions are apparent. Regional differences in income per capita, unemployment rates, investment activity, output or economic structure, composition of trade and so forth, have been found to exist.

While the existence and characteristic features of separate regions are well documented, analysis of regional differences in regional participation in national development has been weak. It would seem that various regions have experienced different stimuli or responded differently to similar stimuli of development since an uneven distribution of economic activity has evolved.

The centralization of production and marketing, and the persistence of depressed, high unemployment-low wage regions are two features of this uneven development. We want to examine the basis of these trends. A major premise of this thesis is that understanding the growth of the Canadian economy requires examination of the regional dimensions with respect to the volume and welfare effects of national development.

Existing theory has had greater difficulty in explaining regional output and income disparities within an advanced economy than between nations. Interregional factor and commodity mobility is expected to be greater than international flows. Therefore, economists would normally predict a greater

tendency toward equalization of income per capita and diffusion of growth throughout a national economy. The welfare and volume effects of national development should be evenly dispersed; but they are not. We must examine why national development has a differential impact on the various regions --or conversely, the differential regional contributions to national development.

Regionalism within Canada has been popularly expressed in the provincial and national politics of our society. It is of interest to the economist to analyze the economic bases of regional conflicts and interdependencies. How a development model incorporates the spatial dimensions will influence its explanatory effectiveness and, therefore, its policy recommendations. A fundamental proposition of location theory justifies such an examination of the evolving spatial context of national development. Peter Wiles notes:

> "But in fact there is no such thing as a rational output programme independent of location. For the choice of location must be permitted to determine the choice of output, and vice versa. They are co-variables presenting a simultaneous equation." [1]

Thus, how growth and development are generated within the national economy, or exogenously determined, partially depends on the roles played by the different regions, their similarities and differences. Beyond the empirical problem

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1. P.J.D. Wiles, The Political Economy of Communism (Harvard University Press; Cambridge, Mass.: 1962) p. 25.

of defining a region and performing regional income estimation, there are the theoretical problems of abstracting from reality to a degree which yields an understanding of the economic relations between geographical areas as well as the economies of spatial separation.[1]

For our purposes we will define an economic region as a geographical space in which functional and structural characteristics of economic activity distinguish the area from other areas. Functional-structural characteristics describe the aggregate input and output combinations of regional production functions, and subsequent income-expenditure, saving-investment patterns. Our definition of a region permits a broad examination of the relations and separations of regions crucial to our understanding of the regional dimensions of national development.

Although particular reference will be given to Canadian development, both theoretical schemes might be applied to several countries such as the United States, Australia and Latin American nations. The hypothetical conditions depict an economy whose modern economic history was initiated by an established metropolitan centre, Europe, from which capital

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1. John R. Meyer, "Regional Economic Analysis", American Economic Review L III, (March 1963) p. 25. In an advanced economy it is presumed that separate regions are well integrated. Integration implies that the inter-relationships are influential in the patterning of development. The mobility of resources and products, especially trade and investment flows, and the private and public development decisions, based on knowledge of regional alternatives, reflect the nature and extent of integration. This is what we hope to explain.

and labour emigrated to exploit the production possibilities coincident with relatively abundant natural resources and sparse indigenous populations. Thereafter, the development of the nation reflects the interaction of indigenous developments with the international economy. Explication of historical interactions will therefore depend on the regional and interregional mechanisms which are believed to characterize the development process analyzed.

We would preface our evaluation with some comments about observed trends and the development problems facing regions within Canada and throughout the world. Some areas face a deficiency of industry and commerce. Real income is relatively low while unutilized capacity and unemployment is high. Other areas are characterized by relatively high incomes per capita and low unemployment rates. These regions face the problems of pollution and congestion of various forms. Their social infrastructure appears overloaded.

Location patterns are efficient according to the parameters affecting private decision-makers. They are not necessarily optimal from a societal point of view. Ironically, while peripheral areas demand infrastructure to attract <u>more</u> industry to their region, large market centres are demanding more infrastructure to service <u>existing</u> industries as well as those <u>expected</u> to locate there in future. While peripheral areas demand more <u>incentives</u> for industrial location within their jurisdiction, the large market centres are demanding <u>subsidies</u> to industries for pollution abatement.

If these demands reflect underdevelopment of poorer regions and overdevelopment of richer regions, then the economic historian has several tasks. He must not only describe the trends, but attempt an explanation. He must evaluate the consequences. What are the effects of concentration on national and regional welfare? The prefixes 'over' and 'under' imply that the existing spatial configuration is suboptimal. If so, what are the causes and effects of suboptimality?

The nature of the national economy with respect to the regional dimensions must be explicit before policy directed toward improving social welfare can be implemented. This is why the explanatory effectiveness of theory is so important. Without explanations, policy is confined to alleviation of the consequences rather than removal of the causes.

Thus, we want to examine the theoretical predictions concerning the regional dimensions of national development. In the next chapter we will draw from regional growth and development models and location theory provided by the traditional, mostly neoclassical, approach to economic analysis. In Chapter Three, we will derive from the metropolis-hinterland approach alternative predictions concerning the relations and separations of economic activity among regions. In the final chapter we will provide a comparative evaluation of the predictive power and implications of these models.

CHAPTER TWO

REGIONAL DIMENSIONS OF DEVELOPMENT ACCORDING TO TRADITIONAL ANALYSIS

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Introduction

In this chapter we will focus on the essential elements of traditional regional analysis. There are two major concerns of the spatial dimensions of development to be pursued. First, why do some regions grow and other regions decline? Second, what are the readjustments among regions and the resulting pattern of income distribution?

Analysis of these spatial considerations requires the use of basic principles from several sources. There is no explicit regional approach in neoclassical analysis. But there are certain principles which underlie the application of theory to a particular problem. Our problem is to concentrate on the interpretations and predictions of received theory with regard to the spatial context.[1]

Prices play a fundamental role in the neoclassical approach. Prices in a free-enterprise exchange economy express opportunity costs by reflecting relative scarcity. Scarcity is evaluated in terms of demand and supply of products and factor inputs. Neoclassical price theory[2] is essentially a

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1. See Richard Caves, Trade and Economic Structure, (Harvard University Press; Cambridge, Mass: 1960); Hugh O. Nourse, Regional Economics, (McGraw-Hill Book Company; New York: 1968); Meyer, pp. 19-54.

2. See Milton Friedman, Chapter One, Price Theory, (Aldine Publishing Company; Chicago: 1972: 1962), pp. 6-11.

study of how a decentralized exchange market allocates scarce resources among competing uses.

The distribution of income is predictable from price theory. Relative product prices indicate to which production process human, capital and material resources should be allocated. Factor demand is the product of output price and the value of the marginal product, and supply reflects maximizing decisions by owners of capital and labour. For any given pattern of factor resource ownership, then, the distribution of income depends on the simultaneous interaction of relative factor supplies and the demand for such factors.

One of the underlying principles of the neoclassical approach is therefore the allocation of resources and products according to their highest returns. Optimal allocation is an integral part of the input-output decision of profit-maximizing firms. A firm attempts to maximize profits for any given set of inputs and final product prices or to minimize the input-cost combination for any given output. Since incurred costs include charges for assembling inputs and distributing outputs, the spatial organization of production and and distribution, or the location of economic activity will respond to alternative market determined cost-revenue conditions.

The neoclassical conception of growth[1] involves a sequential expansion of an economy's production possibilities fron-

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1. See Bent Hansen, <u>A Survey of General Equilibrium Systems</u>, (McGraw-Hill Book Company, New York, Toronto: 1970).

tier. The aggregate production function may shift over time with either an increase in inputs or an improvement in technique, implying technological change. Growth is defined as a rise in income per capita resulting from capital deepening and/or technological progress.

Efficient resource allocation is elemental to the neoclassical conception of growth. There are two broad assumptions necessary for the efficient allocation of goods and factors through time and space. Both knowledge of alternate opportunities and mobility of factors and products are assumed. In an advanced economy, interregional allocative ability is expected as long as separate regions are well-integrated. As part of our survey we will discover that classical development theory goes beyond simple neoclassical theory to consider non-market factors which inhibit allocation and integration.[1] Consideration of such non-market factors may help to explain observed differential growth and income potential among regions.

We will utilize both static and dynamic analysis in our study. First, we will consider the initial establishment of separate regions. We will inquire into the reasons for the initial interest in a young region. Migration of capital, labour and technology from established economies is expected to implement the development of an export commodity. We will examine the neoclassical predictions about the extent of mig-

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1. See W.A. Lewis, The Theory of Economic Growth, (Richard D. Irwin, Inc.; Homewood, Illinois: 1955)

ration.

We will then analyze the nature and extent of ancillary development supplementing the export base. We will discuss not only the production linkages resulting from the type of staple, but also study where these linkages are expected to be established. Our major concern in this entire section is whether two regions are expected to have different structural-functional features even if living standards are the same, when they come into their initial equilibrium. If so, we are interested in the neoclassical explanation for this result.

The second major section analyzes the dynamic adjustments in the initial equilibrium of the national economy. We will discuss the forces which affect the export bases of various regions and consider the process of regional adaptation. We are concerned about the changes which influence the growth and development of separate regions and subsequent migration flows.

Throughout this section we want to find out what determines which regions make the adjustments necessary for continued growth and development. Then, we will question neoclassical predictions concerning factor prices and income per capita. Underlying the discussion are the questions: can traditional neoclassical theory explain observed behaviour? Where the predictions are not strictly borne out, is it merely a problem of too restrictive assumptions such as perfect knowledge, perfect mobility, perfect competition and the like? If so, this would suggest refinements in the model to incorp-

orate more appropriate conditions.[1] Or are the shortcomings more fundamental, requiring a rejection of the basic neoclassical approach? Critics contend that neoclassical analysis cannot incorporate fundamental institutional factors such as surplus and economic power which are necessary for explication of regional development.

Initial Spatial Equilibrium

A young nation may become involved in the international economy for a variety of reasons. The reasons for external interest and the nature and extent of ancillary development may vary among geographical areas. For the purposes of analysis, we may hypothesize the existence of two areas within a larger nation.[2] Both regions are relatively undeveloped[3] and unpopulated but may be distinguished by certain geographical features--resource endowments and location within the transportation network. The assumptions of export base theory are pertinent. These regions are originally not constrained by population but have grown up within the capitalist institutional framework. Factors of production are able to migrate from the established economy in response to profit maximizing

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1. There are, for instance, several works which consider the economics of risk and uncertainty, theories of imperfect competition within the neoclassical framework.

2. The political nation may not be established at the outset of development. For example, Canada was initially a broad area with contiguous but politically separate colonies.

3. This term is used in the neoclassical sense and not meant as a value judgement of the cultural advancement of the indigenous population.

opportunities.[1]

According to the staple thesis, a region's comparative advantage depends on "the resource endowment, international commodity prices, transportation costs, and relationships with established trading systems."[2] Resource endowments and transportation costs basically determine the costs of supply by a particular region. These costs should be less than international commodity prices if the region is to market a competitive good. The investments pursued by established trading systems influence the allocation of productive activity between the newly established regions and existing centres. This allocation then influences trade relations according to the distribution of goods produced. Capital formation will be directed toward the reduction of production and costs so that the marketability of the goods is strengthened.

The technological characteristics of the export product production function affects the growth pattern of the region through the capital and labour attracted and indigenous developments encouraged. Subsequent expansion within the region depends on locational linkages. Forward, backward and final demand linkages will develop to support the export base[3],but

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1. Douglas C. North, "Location Theory and Regional Economic Growth", Regional Development and Planning, John Friedmann and William Alonso, eds., (The M.I.T. Press; Cambridge, Mass.: 1964) pp. 240-241; M.H. Watkins, "A Staple Theory of Economic Growth", Approaches to Canadian Economic History, W.T. Easterbrook and M.H. Watkins, eds.,) McClelland and Stewart Limited; Toronto: 1967) p. 53

2. G.W. Bertram, "Economic Growth in Canadian Industry, 1870-1915", Easterbrook and Watkins, p. 76.

3. Allen C. Kelley, J.G. Williamson and R.J. Cheetham, Dualistic Economic Development, (University of Chicago Press; Chicago: 1972) p. 225; Watkins, Easterbrook and Watkins, pp. 54-57.

their extent depends specifically on the characteristics of the leading sector. Location theory is useful in predicting how export production may lead to ancillary developments. Several supply and demand forces determine the costs and revenues of production at alternate locations. Key location factors will be exogenous to the young nation, but pattern its initial development.

Central place theory predicts the evolution of an hierarchy of cities even on a plane homogeneous in population and resources. Average costs, which generally decrease with increased rates of production, and transportation costs establish segregated market areas.[1] Both economies of scale and transportation costs will vary among commodities such that varying market sizes will evolve. Economic operation may be categorized into national, regional and local markets by the threshold market size applicable. According to Robinson, the size of the market served by a single centre increases as economies of scale become sufficient to offset increasing costs of transport with distance. Therefore, the marginal economies of scale are large relative to transport costs when a single centre serves the national market, but small relative to transport costs for local goods.[2]

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1. Nourse, pp. 2-3

2. E.A.G. Robinson, ed., Backward Areas in Advanced Countries, (Proceedings of an International Economic Association Conference; MacMillan and Co. Ltd.; London: 1969) p. 4

Central place theory is used to describe the evolution of an hierarchy of cities within a region. When economies of scale and transportation costs are incorporated into the model, then an hierarchy of regions may evolve. Those regions containing cities whose economic activity serves national as well as regional and local markets become larger and more advanced than those regions containing regional and local centres alone.

The nature of the evolving hierarchy of regions depends on the forces which direct the locational orientation of production and the resulting locational linkages observed. Location orientation refers to the relative pull of the raw material source versus the pull of the market. Production is thus attracted to one location or another, or both if they are contiguous. A firm may generally be classified as material-oriented or footloose. According to Nourse:

> "...as long as delivered price of the final product rises less rapidly than marginal cost of production from the least-cost site, firms will tend to concentrate where the input price is least. On the other hand, if the delivered price of the product from the least-cost site should rise more rapidly than the marginal cost of production, plants exist at the market centre, the material source, or both sites."[1]

If raw materials are a significant proportion of production costs, a material oriented situation arises. When capital and labour are more important, assuming the mobility of these factors, then a footloose industry exists. However, the existing distribution of capital and labour may strengthen market

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1. Nourse, p. 85

pull.

What often causes market pull to dominate the location decision is the cost and pricing interdependencies among firms within the market area. The ability to substitute inputs may allow minimum delivered price to be the major determining factor. Furthermore, the delivered price is influenced by variations in market demand. A firm can minimize the effect of these variations by locating close to the market. The market pull is strengthened in addition by economies which are either external to the firm but internal to the industry or external to the industry. While these external economies may be classified in various ways, Nourse makes an important distinction between mobile and immobile economies. The former occur in an industry as it expands no matter where individual firms locate whereas the latter can only be captured if all firms congregate in the same area.[1] The immobility of external economies may reduce the growth impact of an export base to the region. The agglomeration economies which reflect the interdependencies mentioned above can only be captured in large market areas.

The development of an export base generates demand for a range of ancillary products. The regional impact of this is predicted through the workings of the multiplier-accelerator process, where the extent of leakages out of the region has been determined by a careful application of location

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1. Nourse, pp. 85-92

theory. The more favourable a location the region is for the range of linked activities, the greater will be the value of the regional multiplier.

Thus, predicting the extent of linkages and the consequent ability of a region's export base to generate economic activity requires explicit location analysis. The relationship between the separate regions and the established economy is important in the determination of the export base and income generated initially. However, what dynamic forces determine where these locational linkages will lie needs further specification.

Dynamic Adjustments in the Spatial Equilibrium

We will now examine the predictions provided by the neoclassical framework concerning the spatial configuration of dynamic sources of growth and determinants of structural change. Forces which shift the interest in a region and ancillary developments will shift the equilibrium position hypothesized. We want to study the long run changes in location of production within a developing nation. According to Nourse:

> "Long-run changes in the location of economic activity or its volume cause the growth and decline of regions. Such changes might include the shift of a specific manufacturing activity caused by change in the local production costs, market accessibility, or transportation costs in that area or elsewhere. Changes in the demand for local resources or products most profitably produced in the area are also in this category.[1]

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1. Nourse, p. 5

The causes and consequences of the long-run evolution of relations and separations of regions are found to depend upon various regional responses to external shifts in demand and supply and indigenous efforts to affect supply. As a national economy evolves it is presumed that the regions become increasingly integrated in a functional and structural sense. That is, trade and investment flows indicate that complementary economic activity among regions develops.

The main issue is how the integration process among regions occurs. We are interested in how the hierarchy of regions evolves over time. What forces shape the evolving separation of regions according to distinguishable economic functions and structures? What forces shift the locational orientation over time and the input-output linkages within and among regions? What are the qualitative and quantitative effects of these forces on the individual regions? Finally what is the nature of migration flows which reflect and reinforce the evolving geographical division of labour?

The map of economic activity is continually reshaped whenever shifts in supply and demand cause disequilibrium, and subsequent equilibrating forces are induced. When the national economy is expanding, then the decline of a region may only be relative and not absolute. Thus, if other regions capture the forward and backward linkages resulting from the expansion of activity in one region, then the region not capturing the linkages may experience a negative balance of payments. Throughout national development every region may

grow, but some regions will expand relatively more until equilibrium is re-established or the income flows are reversed by another shift in opportunities.

We need to decipher the neoclassical explanation for the observed tendency towards increasing concentration of economic activity. Regional specialization is a dynamic process. The nature and extent of a region's export base, and supporting goods and services produced, influences the extent of subsequent developments. The cumulative effect experienced in urban-industrial centres, for instance, is expressed by such dynamic forces as the attractive pull of agglomeration economies, the more efficient operation of input markets, and the conducive atmosphere for innovation and technological change.[1] Conversely, the consequence of depopulation and deindustrialization reduces the ability of a region to maintain a sufficient labour supply. The competitiveness of the region declines more and more. Changes in factor endowments and productive techniques have favoured larger markets in the long run because of the shifting importance of environmental factors. Hoover notes that the character of 'natural' resources is changing in importance from the lure of the raw material site towards the lure of social amenities including climate, housing and recreational facilities.[2] This trend is partially a function of the in-

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1. Nourse, p. 222.

2. Edgar Hoover, "Some Old and New Issues in Regional Development", E.A.G. Robinson, pp. 343-359.

creased importance of services[1] in the final demand sector. In addition, the increased capture of waste materials in the manufacturing process through technological improvements yields a long run reduction in the proportion of raw materials to output.

These forces weaken the geographical linkage of the raw material site such that location decisions are decreasingly material-oriented. Moreover, the ability to separate additional stages of production has patterned development so that weight reducing activities such as concentration and smelting continue at the material site while succeeding stages of fabrication become agglomerated at the market centre.[2] Minimal processing occurs in peripheral areas where natural resources are not depleted. Some refining and fabricating may occur in regional centres whereas further processing will be located in national and even international centres.[3]

The changing structure of transportation costs also mobilizes this trend. The cost of transporting heavy and bulky goods is becoming relatively unimportant compared to handling costs of high value goods. These handling costs are raised with the requirement for speed and flexibility of transport.

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1. Harvey Perloff and Lowden Wingo, 'Natural Resource Endowment and Regional Economic Growth", Friedmann and Alonso, pp. 220-222.

2. Ibid., p. 218

3. For example, Prairie grain is shipped to Central Canada for the most advanced stages of the production process.

Edward Ullman illustrates how these influences have led to the observed location patterns in the following summary:

> "In 1900 each dollar of raw material yielded \$4.20 in finished product; in 1950 \$7.80, in constant value dollars. Likewise it appears that economies in the shipment of bulky commodities in volume--coal, oil, ores--are increasing relative to the handling costs of the finished packaged materials, further drawing industry to the market. However, the increasingly lower grade of many non-fuel mineral products may work in the opposite direction, although the main effect is merely to set up near the ore, concentration plants which employ few, rather than fabricating establishments employing many."[1]

As long as the present mass-consumption, efficiency orientation of society continues, the above production and distribution economies are expected to reinforce the concentration of economic activity. The trend toward concentration is further enhanced by what Ullman describes as the "self-generating momentum of the concentration itself."[2] Many complementary activities will build around this concentration to economize information and transaction costs which are the basis of their interdependencies.

It can be seen that most of these forces--the changing structure of demand, production and transportation technology, and factor endowments (which are really evaluated in terms of the interaction of final demand and technological change)--will continue to work towards concentration of economic activity.

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1. Edward Ullman, "Regional Development and the Geography of Concentration", Papers and Proceedings of the Regional Science Association, IV, (December 1957) p. 185.

2. Ibid., p. 179.

The result of this concentration is that some regions continue to specialize in primary activity while others specialize in highly processed goods and services. Thus, those regions that initially developed a wider range of activities will continue to diversify, while those restricted initially to basic staple[1] production will find it increasingly difficult to diversify.

Before we examine the consequences of concentration on the regional adaptation process, we should define the two types of regions which have evolved from the initial equilibrium. We will refer to urban-industrial and rural-staple regions in the following discussion and subsequent chapters. An urban-industrial region experiences growth and structural change. It is developing. The spatial concentration of production generally implies the quantitative aspect of increasing volume of activity and the qualitative aspect of diversifying structure. In contrast, we may characterize other areas as rural-staple regions because of their dependence on primary products. There are two kinds of staple export regions. A growing region is one which experiences a rising demand for its exports. A declining region experiences a relative or absolute decline in export demand.

In the neoclassical model, initial equilibrium is characterized by the equalization of payments to homogeneous factors. Given the secular shifts in location equilibrium indicated above

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1. We use the term staple to represent the chief exportable commodity produced by a region (see North, Friedmann and Alonso, p. 244). As an economy becomes more diversified, a specific commodity becomes less important. During such diversification, rural staple regions would be said to transform into a more advanced economy tending toward an urban-industrial region.

we wish to ascertain the predicted impact of interregional factor migration. Migration of factors from regions offering lower returns to those offering higher factor payments is the adjustment process analyzed in neoclassical theory. The simple model indicates the adjustments between rural-staple and urban-industrial regions will be equilibrating. We will examine the arguments and then try to determine whether persistence of disequilibrium is expected to be more a function of adjustment lags or differences in production functions.

Bernard Okun and Richard Richardson view migration in response to marginal productivity differentials as a necessary by-product of economic growth. Migration will synchronize patterns of natural population increase and growth in economic opportunity when they are at variance with each other. They conclude that factor price differentials should be eliminated by migration even though per capita incomes may continue to differ among regions because of differences in demographic behaviour. Their conclusion is based on the following:

> "A fundamental proposition of general equilibrium theory and the theory of the competitive market is that discrepancies in factor payments, caused by shifts in supply and demand schedules, will lead to an appropriate reallocation of productive factors until equilibrium is restored. In the particular case in which we are interested, theory asserts that inter-regional factor mobility is a force which tends to equalize prices for homogeneous factors in different regions."[1]

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1. Bernard Okun and Richard Richardson, "Regional Income Inequality and Internal Population Migration", Economic Development and Cultural Change, IX (January 1961) p. 130.

With the exception of other influences and lags which qualify these predictions,[1] in the long run, theoretically, the differentials could not be maintained because of the response towards the region with the greatest opportunity.

In fact, the existence of equilibrium is not observed[2] especially in Canada; but even in other industrial countries. The persistence of growth and income differentials among regions raises the issue of whether lags in equilibrating mechanisms and market imperfections are sufficient to explain this trend. If not, a closer examination of the process of regional adaptation is in order.

There are many factors which inhibit the smooth adjustment from past opportunities to new opportunities in the "constant procession of compromise between past and present."[3] A worker or investor may be reluctant to transfer his resources from one region to another because of the monetary or psychic costs of transfer. The determinants of rates of returns are complicated by expectations involving one's time horizon and knowledge of alternative investment opportunities. Both involve risk and uncertainty. Governmental policies such as minimum wage legislation influence adjustment by directing

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1. See Nourse for an example of the present value approach, incorporating imperfections in market opportunities involving time and risk, for an explanation of why migration may not be profitable., pp. 202-205.

2. See Chernick; Green: MacKintosh; (footnote 1, page 2)

3. E.A.G. Robinson, p. 6.

the individual responses to new opportunities and altering the opportunities available.

The existing distribution of population, per capita income and land-use patterns inhibits the response to new opportunities. A study of regional development and industrial location patterns discovered that:

> "Although development of other sources of power and transport have brought decisive changes in relative location advantages of various regions, the existing concentration of population and the distribution of capital stock, particularly that invested in transported facilities, have so far prevented any major shifts away from the old centres of activity."[1]

Adaptation of the dualist model provided by Kelly, Williamson and Cheetham may contribute to our determination of what forces perpetuate regional disparities in income per capita. The model recognizes that neither the industrial or agricultural (non-industrial) sector is homogeneous in character. The production, consumption, and demographic aspects of the different sectors do, however, provide a basis for the rural-urban dichotomy and a geographic-specific interpretation of dualism when taken together[2]. Without altering the basic behavioural characteristics of each region-sector or the direction of regional-sectoral flows, changing the equilibrating assumption can alter the predictions of the model with respect to long run trends in sectoral incomes and factor

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1. U.N. Department of Economic and Social Affairs, "Problems of Regional Development and Industrial Location in Europe", Friedmann and Alonso, p. 408.

2. Kelley et al, p. 11

prices.

The assumption that instantaneous and costless adjustment to factor price differentials appears in an equilibrium model, providing the basic difference between them. In both cases, instantaneous and costless adjustment to price differentials in the product market is assumed.[1] Thus,

> "[The] economy moves through a sequence of static, short-run positions from a given set of initial conditions. These positions are equilibrium or disequilibrium states depending on the model specifications."[2]

The authors altered the specifications of the basic model to account for slow adjustments in the factor markets. For instance, they assumed that the capital stock was immobile and the division of ownership between rural and urban capitalists was important. They recognized that financial institutions influence the efficient allocation of saving and investment. Thus, the disequilibrium model included a brokerage fee which represented a cost to investors who could operate in either sector as well as urban property income. Price expectations based on past differentials also became an important determinant of investment allocation. All of these factors contributed to the economy's inability to equalize the rental rate. Similarly, wage differentials may persist because of migration costs and the formulation of expected income with a lag in addition to other factors not incorporated in the model.[3]

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1. Kelley et al, p. 15
2. Ibid., p. 15
3. Ibid., pp. 234-251

The significant result is that disequilibrating forces cause differences in sectoral incomes and factor prices to persist and potentially widen in the long run. This is particularly important because the model is basically neo-classical. The specifications which lengthen the period of adjustment are still consistent with the market view of the world.

It should be emphasized that different production conditions and consumer behaviour characterize the urban-industrial versus the rural-agricultural region in this dualist model.[1] However, higher wage and rental rates in the urban-industrial regions may be explained by differences in production functions[2] and relative export demand elasticities even without disequilibrating forces. For example, Borts examines a competitive economy with interregional factor mobility where capital and labour are fixed in the short run but expansible in the long run. The simple model which considers migration between two regions producing the same output with the same production process is contradicted by a more complicated model which disallows internal reallocation of factors between outputs.

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1. Kelley et al, p. 11

2. The traditional dualist model distinguishes differences in regional production functions in terms of the sophistication of the technique applied. However, aggregate regional production functions may differ because of differences in output composition. For instance, given that some industries are capital-intensive and others are labour-intensive, varying proportions of these industries within regions will lead to different regional production functions upon aggregation. Differences in relative factor shares or the proportion of activity devoted to primary, secondary of tertiary sectors describe differences in regional aggregate production functions.

A high wage region can grow faster than a low wage region depending on the rate of increase of money wages relative to the price of imported goods. The following statement summarizes the logic of the result:

> "It has been shown that the real wage in the region depends upon the marginal physical products of labour and the prices of the region's outputs relative to the prices of its imports. The marginal efficiency of investment depends on the marginal physical product of capital in the region and the prices of the region's exports relative to the prices of domestically produced and imported capital goods. Even though the marginal physical product of labour is inversely related to the marginal physical product of capital through factor proportions, favorable movements of the relevant price ratios may raise both the real wage and the marginal efficiency of investment."[1]

These results depend on different production functions between the two regions or differential price ratios of exports to domestic goods.[2] Thus, market imperfections are not the sole reason for differential volume and welfare effects of national development among regions.

We may be able to understand differences in production activity among regions only if we go beyond the neoclassical approach. We require a broader analysis of the regional adaptation process. We have noted that the neoclassical approach explicates factor reallocation movements. Neoclassical adjustments are really just shifts in the allocation of factors from one location to another in response to given changes.

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1. George Borts, "The Equalization Returns and Regional Economic Growth", American Economic Review, L. (June 1960) p. 326

2. Ibid., p. 319

Our concept of adaptation does not take changes in economic opportunities as exogenous forces. We want to analyse the differential ability of regions to move on to new opportunities so that some insure absolute and per capita income growth while others do not. Change is initiated in a developing region.

Regional adaptation is perceived as a causally interrelated growth process involving forces which shift supply and demand over time. Therefore, a developing region is one which makes the transition from dependence on rural-staple products to a more diversified economy. The ability to adapt to forces of change is implied. Such growth factors as capital accumulation and improved technology become an integral part of the region. These growth forces become internalized from the control of the external economy to that of the region itself. The developing region can therefore reallocate resources. Moreover, change is initiated in a developing region whereas a region which does not develop is usually forced to adjust to change initiated elsewhere.

The distinction between neoclassical adjustment and our broader definition of regional adaptation has important policy implications. For instance, simple trade theory predicts that growth is associated with trade based on developing comparative advantages.[1] When applied to two regions

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1. David W. Slater, 'World of Trade and Economic Growth: Trends and Prospects with Application to Canada", World Trade and Trade Policy, H. Edward, English, ed., (University of Toronto Press; Toronto: 1968) p. 51.

within a country, trade theory would predict that both urban-industrial and rural-staple regions gain from specialization. Even if such specialization led to emigration of factors from the rural-staple region to the urban-industrial region,[1] both regions should gain from trade since factors are then allocated according to their highest returns until returns are equalized. The more demanding definition of regional adaptation would discourage specialization _if_ the resulting emigration reduced the rural-staple region's ability to move on to new opportunities. Thus, in the simple model, specialization is good. In more complex terms, however, specialization may vitiate domestic or internal growth and development forces.

Thus, if we go beyond neoclassical analysis, we may be able to predict how the regional production-consumption relations resulting from specialization may lead to differences in income-generating capacity. Chenery incorporates disequilibrium in factor markets, indirect effects of expanding a given type of production, the influences of decreasing costs with output expansion (in the simultaneous determination of consumption, imports and production), and export demand changes into his analytical framework.[2] These dynamic forces require a broader definition of opportunity costs if optimum resource allocation is to be acheived over time. When production inter-

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1. This is not to imply that trade theory assumes mobility of factors as well as commodities.

2. Hollis B. Chenery, "Comparative Advantage and Development Policy", _American Economic Review_, LI, (March 1961), p. 22

dependencies are included, the notion of comparative advantage is complicated.

Therefore, when development theory assumptions such as fixed investment resources are specified in the model the importance of flexibility and choice is emphasized as opposed to regional specialization. A region which develops a diversified industrial structure avoids the consequences of unpredictable changes in demand and supply.[1]

The analysis has not yet explained the evolution of different production capabilities between regions. We must consider non-market forces which are not incorporated in the neoclassical model. Such forces are, in fact, inconceivable in the neoclassical framework. Linder considers differences in 'reallocative ability'[2] among economies when studying the adjustment process from one equilibrium to another. Developed economies respond to expanding profit opportunities whereas underdeveloped economies do not. The weak reallocative ability of the latter group results from the lack of institutions which could promote growth effectively--an assumption alien to neoclassical analysis. Beyond the differential responsiveness of the regions to profit opportunities, the stronger reallocative capacity of developed economies is reinforced by the

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1. Ibid., pp. 24-25

2. S.B. Linder, An Essay on Trade and Transformation, (John Wiley and Sons; New York; Almquist and Wicksell; Stockholm: 1961) p. 12

total factor inputs accumulated and higher productivity levels[1]--a consideration acceptable to neoclassical analysis.

If we were to apply Linder's approach to our analysis of regional development, we would classify the urban-industrial regions as 'developed' and rural-staple regions as 'underdeveloped'. This classification is possible in the traditional model of an advanced economy <u>only if</u> the rural-staple region lacks investible funds and indigenous entrepreneurs <u>and</u> is relatively isolated from national institutions which could disperse investment activity when opportunities arise.

The development of a dualistic or pluralistic national economy, one with two or more structural-functional regions, may be partly understood when one distinguishes between proximate and underlying causes of growth. Lewis outlines three proximate causes of growth:

> "First, there is the effort to economize, either by reducing the cost of any given product, or by increasing the yield from any given input of effort or other resources....Secondly, there is the increase of knowledge and its application....And thirdly, growth depends upon increasing the amount of capital or other resources per head. These three proximate causes, though clearly distinguishable conceptually, are usually found together."[2]

By noting the normal juxtaposition of the proximate causes, Lewis thus raises the issue of why these causes operate in some areas and not in others.

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1. <u>Ibid</u>., p. 16

2. Lewis, p. 11

Thomas Morgan suggests some of the underlying causes. These include: society's system of values, religion, institutions, changes in the composition of the population, and ability to adapt successfully to increasing rates of technological change.[1] Reliance on such underlying causes may explain dualist economies in which the regions are relatively isolated. It seems questionable for advanced economies such as Canada. The different presumed conditions will require different explanations for the resulting spatial configuration in an advanced economy.

Classical development theory focuses on the conditions necessary to set capital accumulation and self-sustaining growth into motion. The analysis leads to a discussion of obstacles to growth which inhibit efforts to economize, technological advance or capital accumulation.[2] Two major obstacles are: capital shortage due to a low propensity to save; and the subsequent limitations of investment (even in the absence of a capital shortage) due to insufficient skills and inadequate infrastructure. These arguments seem tautological. The problem is defined in terms of itself. Thus, a region experiencing a capital shortage or low marginal efficiency of investment is said to be poor and underdeveloped

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1. Thomas Morgan, "The Export Base and Development Stages Theories of Regional Economic Growth: An Appraisal", Land Economics, XL (November: 1964) pp. 421-422.

2. Lewis, pp. 207-265.

relative to a diversified region where savings, entrepreneurship and investment opportunities are greater.

Our explanatory problem arises when we assume that broad integration of the national economy exists. An advanced economy should provide the necessary mobility of factors and commodities to eliminate any obstacles to growth existing in a particular region. How can we explain regional differences in response ability in the long run under these conditions?

Given the predominant trends in technological advance which have reshaped the economic map over the past century, the test is whether neoclassical theory can predict the increasing difficulty experienced by a rural-staple region in any attempt to diversify. First, it is possible that staple development occurs at the expense of secondary production. The export base model predicts that these developments are complementary; and that the export base even induces development of indigenous commodity production. In contrast, Charles Tiebout notes that a primary-subsistence economy may not pass into secondary and tertiary production if other regions already perform these functions.[1] If this is so, the foundations for industrial development are weak.

Secondly, the development of a primary export base region complements the development of a metropolitan centre as a

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1. Charles Tiebout, "Exports and Regional Economic Growth", Friedmann and Alonso, p. 259.

consequence of the geographical division of labour. Technological and institutional factors, particularly market organization, transportation and communication, have extended the size of markets. It would seem that the increased size of markets and concentration within metropolitan centres, makes it harder to transform a regional economy from a staple base which <u>complements</u> the manufacturing centres to an industrially based economy which <u>competes</u> with these areas. While this argument does not explain the original circumstances which advantage one region and disadvantage another, it can explain why the relative advantage is perpetuated.

Summary

In sum, we have noted various strengths and weaknesses in the neoclassical analysis of regional dimensions of development. One strong point drawn from the analysis concerns its ability to explain the initial separation of regions in terms of technological and geographical factors. These factors determine the production and transportation costs of alternate locations. Since optimal location is an influential parameter in the input-output decision, it is important that this be specified.

The neoclassical analysis of dynamic shifts in the spatial context is more descriptive than explanatory. It predicts that market size is effectively broadened through increasing economies of scale and decreasing transportation costs.

Concentration of production is expected because of these technological changes and the market pull which is strengthened through agglomeration economies such as production interdependencies, distribution economies, and improved capital and labour markets. This analysis would be strengthened if the underlying causes which shape the evolving map of economic activity were explicated.

The discussion of the process of regional adaptation uncovers the weakest part of neoclassical analysis. It explains factor flows in response to shifts in opportunities but it does not explain how a region can capture those new opportunities. Thus, while it can explain the concentration of economic activity it has difficulty explaining why some regions grow and are more successful in adapting to change than others which tend to decline. We need to review these points in more detail.

The neoclassical model explains the regional factor price levels quite effectively. If the assumed conditions are realistic, then the model predictions are valid. For instance, a simple model would predict the equalization of returns across regions. When differences in regional production functions or price ratios of export to domestic goods are assumed, then the observed tendency for interregional differences in wage and rental rates is predicted.

We want to know what causes the differences in production capabilities over the long run. Why does one region make the transition from primary to secondary and tertiary activity

more easily than another? Why is it increasingly difficult for a region to shift its export base from staple production to a diversified structure? Traditional analysis has been unable to answer these questions without relying on presumed differences which reduce the demand for savings or investment opportunities in some regions.

CHAPTER THREE

THE METROPOLIS-HINTERLAND THESIS AND REGIONAL DEVELOPMENT AND UNDERDEVELOPMENT

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THE METROPOLIS-HINTERLAND THESIS AND REGIONAL DEVELOPMENT AND UNDERDEVELOPMENT

Introduction

Now that we have reviewed the predictions of traditional theories we are prepared to examine an alternative model which demands analysis of the network of ownership and control which patterns the development of the entire capitalist system. The model distinguishes the role of the metropolis, or advanced economy, and the role of the hinterland, the satellite or peripheral economy dominated by and dependent upon the metropole. Crucial to an understanding of these roles is the recognition of the nature of the interrelationships between the metropolis and hinterland.

There is a long-standing tradition of the metropolis-hinterland theme in Canadian literature. John Warnock reviews several important contributions to Canadian economic history in a recent article in Canadian Dimension. The basis of the general metropolis-hinterland thesis is apparently provided by N.S.B. Gras who distinguished four development stages in the metropolitan centre:

"(1) the organization of a market;
(2) the development of industry;
(3) the central organization of transportation and communication; and

(4) the development of financial organization."[1] Other economists emphasized specific elements. For instance, R.D. McKenzie stressed the role of transportation while C.R. Fay stressed the development of financial independence for the advancement of a metropole over neighbouring regions or countries.[2] What is important here is not which distinctive features of the metropolis and the hinterland are most significant; but rather the realization that the means to development applicable to advanced economies are not possible for the satellite because of the very relationship between the two.

Many economic historians have acknowledged the hinterland features of the Canadian economy. For instance, the Laurentian school and staple thesis analyzed the importance of primary resource extraction, strong trade and investment ties with metropolitan countries, and transportation and communication requirements to facilitate commodity exchanges. Early Canadian development was not expected to repeat the experience of Europe and the United States. Thus, theorists such as Donald Crieghton and Harold Innis, who did not support a metropolis-hinterland approach, still would agree that Canada's development required explanation independent of British and American theories. The works of Morton, Lower,

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1. John Warnock, "Metropolis/Hinterland: The Lost Theme in Canadian Letters", Canadian Dimension, Volume X No. 2, (June 1974) p. 42.

2. Ibid., p. 43

Careless, Pentland and Fowke[1] should also be read if one is to understand many fundamental propositions about Canada's development in relation to Britain and the United States.

Such works as Silent Surrender by Karl Levitt and "The rise and fall of the third commercial empire of the St. Lawrence" by Tom Naylor represent a recent resurgence of interest in the metropolis-hinterland theme. These economists have made significant modifications of the thesis in response to what Warnock believes to be a major shortcoming of the earlier writings: a disregard of the element of exploitation.[2] Jim Laxer makes the following observations:

> "For socialist historians, Innis and Creighton provide an essential starting point for an understanding of Canadian history. But socialist historians are not satisfied that Canada's continuing character as a resource-extractive country dependent on outside imperial powers is to be explained by geographic or technological determinism. Instead they see dependence resulting from the relationship that has existed between the capitalist class in Canada and the capitalist class in the metropolitan countries on which Canada is dependent."[3]

The work of Andre Gunder Frank provides an analytical framework for the most recent surge of interest in the metropolis-hinterland theme by Canadian socialists. His analysis

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1. Warnock points out the major articles of interest. We would recommend in particular that of: J.M.S. Carless, "Frontierism, Metropolitanism, and Canadian History", Canadian Historical Review, XXXV, (March 1954) pp. 1-21.; Hugh Aitken, "The Changing Structure of the Canadian Economy, with Particular Reference to the Influence of United States", The American Economic Impact on Canada, Aitken, John Deutsch, et al: (Duke University Press; Durham; N.C.: 1959) for a start.

2. Warnock, op. cit., p. 45

3. Jim Laxer, "Introduction to the Political Economy of Canada", (Canada), Ltd. : The Political Economy of Dependence, Robert Laxer, ed., (McClelland and Stewart Limited; Toronto: 1973) p. 28

is based on his study of Latin American history. His concern with the process and mechanisms of development and underdevelopment begins with an historical inquiry of the relations among regions and countries. In this model, the regional separation of economic activity reflects rather than determines the relations among regions. The development or underdevelopment of a region must therefore be studied in the context of the evolving capitalist system.

We accept the definition of Canada as a satellite to France, United Kingdom and the United States since the beginning of European expansion. We can therefore apply the metropolis-hinterland thesis to the sub-national level while keeping the satellite nature in mind. Specifically, we want to examine the predictions which pertain to the regional dimensions of national development with particular interest to Canadian history. Although the thesis will require some adaptation for our purposes, these modifications require an understanding of the overall nature of Frank's view of the capitalist economic system.

Thus we will first review the basic tenets of the metropolis-hinterland thesis. Once an overview is set forth, we may proceed in a fashion similar to our examination of neoclassical predictions. We will determine the reasons for the initial separation of regions and then the dynamic features of the spatial context of development. This discussion leads directly to the important predictions concerning regional adaptability.

Overview of Frank's Thesis

A major premise of the thesis is provided by the following argument:

> "Economic development and underdevelopment are not just relative and quantitative, in that one represents more economic development than the other; economic development and underdevelopment are relational and qualitative, in that each is structurally different from, yet caused by its relation with, the other. Yet development and underdevelopment are the same in that they are the product of a single, but dialectically contradictory, economic structure and process of capitalism. Thus they cannot be viewed as the products of supposedly different economic structures or systems, or of supposed differences in stages of economic growth achieved within the same system."[1]

Therefore, Frank's model must show how development and underdevelopment are relational, and thereby explicate the qualitative nature of the world capitalist system. According to Frank's thesis, the essence of capitalism is the monopolistic market structure. Capitalism may be conceptually characterized as:

> "a) a system of production for the market, in which
> b) profit constitutes the motive of production, and
> c) this profit is realized for the benefit of someone other than the direct producer, who is thereby dispossessed of it."[2]

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1. Andre Gunder Frank, Capitalism and Underdevelopment in Latin America (Monthly Review Press; New York: 1969) p. 9

2. Ernesto Laclau, "Feudalism and Capitalism in Latin America", (Reprinted July 1973 by the Development Education; Toronto; from New Left Review, Number 67, May - June 1971) pp. 6-7

The determination of the benefactor and direct producer within the spatial context leads to the specification of relations and separations of economic activity among regions and countries. The model is founded on three basic assumptions: 1) expropriation and appropriation of economic surplus; 2) the polarization of development and underdevelopment into metropoles and satellites; and 3) continuity of the monopolistic structure of the capitalist system throughout its expansion, despite changes in form.[1] According to Frank, these are internal contradictions of capitalism itself.

The monopolistic structure of the market forms a commercial network enveloping the various regions and countries. The metropole is the advanced economy which initiates the major economic changes observed throughout the world market. A satellite or hinterland economy generally has a less diversified industrial structure. The satellite remains basically dependent on external shifts in demand and supply. With this characterization, Frank must show how the interrelationships between geographical areas are determined by the metropole.

The concept of economic surplus is central to the thesis. Thomas Weisskopf defines surplus in the following manner:

> "The surplus of an economy in any given year represents the excess of potential total production over socially essential production in that year. Potential total production is a measure of the maximum that the economy could produce, given its natural and technological en-

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1. Frank, Capitalism and Underdevelopment in Latin America, p. 3ff.

> vironment and its employable productive resources. Socially essential production is the minimum amount of production required to maintain the (growing) population at a standard of living necessary to its survival"[1]

The estimation of actual and potential American economic surplus by Joseph Phillips indicates the major components. Property income in the form of rents, profits and interest is not considered a socially necessary cost of production. Thus, property income is an important element of surplus. This accounting procedure contradicts neoclassical theory which considers these income flows as returns to landowners and capitalists for their contribution to production. Economic surplus also includes: wasteful expenditure incurred in the business process, surplus absorbed by government (taxes), output foregone due to unemployment and certain presently unestimable expenditures such as the sales effort penetrating the production process.[2]

The size and utilization of surplus determines the growth and decline of regions. Baran and Sweezy explain that:

> "The size of the economic surplus is an index of productivity and wealth, of how much freedom a society has to accomplish whatever goals it may set for itself. The

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1. Thomas E. Weisskopf, "The Problem of Surplus Absorption in a Capitalistic Society", Current Issues in Economic Policy, Lloyd Reynolds, George Green and Darrell Lewis, eds., (Richard D. Irwin, Inc.; Homewood, Ill.: 1973) pp. 123-124. The replacement of capital stock and/or natural resources used up in the production of essential goods are part of necessary production.

2. Joseph D. Phillips, "Estimating the Economic Surplus", Appendix, Monopoly Capital, Paul A. Baran and Paul M. Sweezy, (Monthly Review Press; New York: 1968: 1966) pp. 369-391.

> composition of the surplus shows how it uses that freedom: how much it invests in expanding its productive capacity, how much it consumes in various forms, how much it wastes and in what ways."[1]

Whether actual economic surplus is as large as society's potential depends on the organization of production and distribution of the social output. Accordingly, the evolving organization of society affects the decisions determining the size and utilization of surplus. These decisions, in turn, influence the rate of technological change and growth.

The importance of surplus to Frank's thesis now becomes obvious. How surplus is generated, to whom the surplus is available and how it is utilized designate the time path of development in the spatial context. The evolution of ownership and control of production and markets is essential to the nature of the interrelationships between the metropolis and hinterland. Ownership and control are the basis of economic power.

Accessibility to surplus is determined by the external and internal monopolistic structure of the capitalist system. The general outline of this structure is an hierarchy of satellites and sub-metropoles which are related to the world metropole.[2] The world metropole develops specific trade and investment ties with regional satellites which, in turn, direct

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1. Baran and Sweezy, pp. 9-10

2. Andre Gunder Frank, Latin America: Underdevelopment or Revolution, (Monthly Review Press; New York: 1969) p. 6

the economic activity of the farthest outposts in a monopolistic manner.

The exploitative development is characteristic of the monopolistic structure and the metropolis-hinterland relations among regions within the system. Warnock notes that: "Imperialism is exploitation. This is also implicit in the general theme of metropolitan domination of hinterlands."[1] James Petras describes imperialism as a global system of power and exploitation.[2] Frank must therefore explicate the mechanisms of imperialism which shape the evolving map of economic activity.

The specific mechanisms of imperialism are those instruments which expropriate the economic surplus from the satellite. Metropolitan investment in the production of hinterland primary resources, for instance, assures a secure source of inputs for the metropole. Even without direct ownership, metropolitan interests could acquire a cheap supply of inputs through their monopolistic buying power. Thus a large proportion of surplus goes to the metropole instead of the satellite because profits and incomes generated are greater than the initial foreign investment and the raw materials extracted may be under-valued relative to competitive

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1. Warnock, p. 46

2. James Petras, "Notes on Imperialism and Revolution", Canadian Dimension, V, (February 1969) pp. 33-35

market prices.

Tax concessions to attract industry into the hinterland also lead to the expropriation of surplus. Lower taxes allow the economic rent to be captured by metropolitan capitalists rather than the hinterland. Furthermore, the inability to attract further stages of production means that the hinterland's potential surplus is reduced. Whether resource extraction is capital-intensive with fewer people employed or labour-intensive at lower wages, the share of surplus generated and available in the hinterland is expected to be less than the high-value added stages of production concentrated in the metropole. The surplus captured by the metropole is further enhanced where the most advanced technique is applied.

Manufacturing activity may also be dispersed by the metropole to the hinterland. The dispersal of more advanced stages of production is becoming an increasingly common practice of multi-national corporations. Direct investment in branch plants is part of their market strategy as will be seen later. The mechanisms of imperialism include the payments for licenses and patents which flow to the metropole along with profits and dividends. The dependence on technology, expertise, capital goods and parts also supports the evolving system of economic power.

Thus the metropolis-hinterland thesis contends that the integration of a region or country into the commercial network of the world metropole has resulted in the channelling

of natural, financial and human resources toward the metropole.[1] Polarization of regions results directly from the expropriation-appropriation of surplus. This explains why the development of the entire economic system is perceived as inherently uneven. The development of the metropole is matched by the obverse process of underdevelopment of the hinterland. Underdevelopment is not seen as a stage prior to significant development. An underdeveloped region is not necessarily at a stationary level. On the contrary, it is becoming relatively worse off as time proceeds.

The satellite becomes more dependent upon and dominated by the metropole because of the latter's monopolistic control over markets, input requirements, and innovative capacity. Thus, despite the extensive accumulation of surplus in peripheral areas and because of the penetration of the commercial network, these satellites are underdeveloped. It is the direction of property income flows between regions which substantially determines the growth and decline of regions.

We may now survey Frank's third major assumption. The monopolistic structure representing the dominant-dependent relationships of metropolis and hinterland is emphasized even though the source or form of domination may vary among circumstances. According to Frank, the polarization of the system into metropoles and satellites has promoted:

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1. Underdevelopment in Canada: Notes Toward an Analytical Framework, (By the Staff of the Development Education Centre; Toronto: March 1974) p. 1. The centralization of savings through the financial system and factor migration are also important elements of the process.

> "The continuity and ubuquity of the structural essentials of economic development throughout the expansion and development of the capitalist economic system at all times and places."[1]

Resources have been misused and misdirected because of the monopolistic structure of the commercial network. Resources have been directed toward the maintenance of the metropolitan economic power, although the world metropole has shifted several times.[2]

The specification of shifts in ownership are not unimportant to Frank. However, for the level of generality and understanding which he requires, it is more important to emphasize the similarities of experience among satellite regions over time. The following quotation illustrates his approach:

> "Though Chile's principal export product has changed several times during the country's history, each time it has been the export sector which has been the principal source of potentially investible economic surplus, and each time this export sector has been controlled by a few foreign interests. Foreigners have owned the mines from which the surplus came. If they did not own the mines or the land which produced the export commodity, foreigners appropriated much of the surplus by exercising monopolistic buying power over its resale elsewhere. Additionally, foreigners owned or controlled a large share of storage, transport, insurance, and other facilities associated with the export of the principle economic surplus-producing good."[3]

Shifts in production from one staple to another will reflect changes in the structure of demand in the metropole.

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1. Frank, Capitalism and Underdevelopment in Latin America, p. 12

2. The influence of Portugal, Spain, Holland, Britain and the United States has prevailed at some time or another in Latin America.

3. Frank, Capitalism and Underdevelopment in Latin America, p. 18

External demand shifts are generally the consequence of innovation in technique and product. The external metropole initiates such changes. The institutional framework is altered to match technological advances in order to effectively maintain and extend control of markets.

At the same time, shifts in the major export staple will reflect "particular development choices made internally, by fractions of the domestic ruling class."[1] The changes in demand or supply initiated by the metropole may reduce the importance of the existing export base to the satellite region or country. The satellite must adjust by shifting its export base or diversifying its structure to avoid decline. The internal monopolistic structure can be expected to adjust to such shifts in a manner which maintains its power, however subordinate it may be. Most adaptations in the past have been attempts to shift from one staple to another as noted above.

We have briefly surveyed Frank's analytical framework. The generation, expropriation and appropriation of surplus, the resulting development of the metropole and underdevelopment of the satellite, and the continued existence of the monopolistic structure of the captitalist economic system are key assumptions of the model. These elemental assumptions of the model reflect the view of capitalism as a global system of economic power and the consequent exploitation of the system.

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1. Underdevelopment in Canada, p. 5

The contradictory nature of these assumptions is derived from the interpretation that the entire process of capitalist development is conflict ridden and paradoxical. As some gain, others necessarily lose. The historical impetus of Frank's approach has led him to hypothesize several conditions and trends which should prevail if the thesis is valid. The major hypotheses are: 1) "the development of national and other subordinate metropoles is limited by their satellite status" (2) satellites experience their greatest economic development _if_ and _when_ their ties to the metropole are weak; but when trade and investment ties are re-established, the satellites are re-incorporated into the system such that "previous development and industrialization of these regions is choked off or channelled into directions which are not self-perpetuating and promising";[2] and (3) regions which today appear the most underdeveloped are those which had the closest ties to the metropolis in the past (i.e. the greatest exporters of primary products and biggest source of surplus)"[3]

We will eventually question whether these hypotheses are representative of Canadian development. First, the analysis of the regional dimensions of the development-underdevelopment process requires further elaboration. We therefore turn to the reasons for initial interest in an undeveloped region and the nature and extent of ancillary development.

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1. Frank, _Latin America: Underdevelopment or Revolution_, p. 9.

2. _Ibid._, pp. 9-11

3. _Ibid._, p. 13

The Establishment of Separate Regions

To begin the metropolis-hinterland analysis of satellite regions, we suppose that relatively new regions exist initially. We also presume an external capitalist system is already established. We want to analyze how the regions will become differentiated and inter-related as the national economy develops. The question of how the national economy and individual regions are integrated into the world market underlies the regional dimensions of national development, and thus, must also be discussed.

We are presently interested in the initial establishment of trade and investment ties between the metropolitan centre and the hinterland economy. The establishment of such ties or economic relations involves an orientation or re-orientation[1] process. Human, physical and financial resources will be directed toward a product that is marketable in the established capitalist economies. The orientation process, therefore, depends on the existence and accessibility of commodities which are potentially marketable. Significant examples in Canadian history are fish, fur, timber, wheat and various minerals.

The marketability of a commodity depends on the external requirements of the metropole. If the established capitalist system could cheaply supply the goods which are de-

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1. Paul Baran, "On the Political Economy of Backwardness", The Economics of Underdevelopment, (Oxford University Press; London: 1958) p. 76.

manded, then there would be no need for it to expand into the hinterland. The world metropole exports capital and encourages emigration when it can no longer fulfill its own requirements but has the means to operate foreign possibilities. Thus, a young region will become integrated into the world market when it can fulfill part of the metropole's external requirements.

The timing of the orientation process is important because the stage of development of the metropole determines the predominant organization of production and the state of technology applicable. Naylor argues:

> "From the structure of the metropolis, its dominant class, its stage of development and the structure of capital, and its external economic requirements, we can deduce the character of the imperial linkage. From the form of the imperial linkage follows the political economy of the hinterland and the degree and pattern of development. From the political economy of the hinterland the nature, horizons, and policy of its dominant class can be deduced."[1]

On the basis of this argument, it is significant that Eastern Canada was developed by France and Britain during the mercantilist era. Naylor maintains that: "Mercantilist empires are premised on exclusivist sources of primary staples with markets regulated by the imperial government.[2] The expansion of the fur trade and Maritime fisheries under the French and British empires exemplify the monopolistic

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1. R.T. Naylor, "The rise and fall of the third commercial empire of the St. Lawrence", Capitalism and the national question in Canada, Gary Teeple, ed., (University of Toronto Press; Toronto: 1972) p. 2.

2. Ibid., p. 31

structure. The metropolitan centres determined the degree and direction of Canada's early development.

The extent of capital and labour migration from the metropole will determine the ancillary developments within various regions. According to the metropolis-hinterland thesis, it is conceivable that one region would attract more capital and/or labour than another. This is not merely a function of technological and geographical determinants shaping comparative advantage "since the metropole defines the character and extent of economic development in the hinterland area."[1] Two young regions, as politically separate colonies, may develop quite differently depending on the source and form of monopoly--the nature of the imperial linkage. Initially, each separate colony will develop its own dominant class individually. These dominant classes are politically and economically dependent upon the metropole.

The imperial linkage becomes important in determining the political economy of the hinterland because it determines the share of surplus expropriated by the metropole and the share remaining in the hinterland. How the indigenous share is utilized depends partially on the degree of independence asserted by the dominant class. The degree of independence reflects the nature, horizons and policy of this dominant class.

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1. Ibid., p. 2

Even though the political economies of separate colonies will be disjointed, strong trade ties among them may evolve. If it is in the interests of the world metropole, then complementary activities will develop among colonial regions--fish, fur, sugar, rum, tobacco and so forth were traded among the colonies. We will now evaluate the metropolis-hinterland predictions concerning the way in which separate regions become integrated with each other upon political union.[1] Will one region supplant some of the world metropole's activity and functions? Will one region dominate another? If so, can the metropolis-hinterland framework predict which region will become a national metropole and which will become a regional satellite?

So far, we have noted that the nature of the metropolitan economy, and its imperial linkage, determines the nature and extent of the initial development of a region. The need for colonies is explained by the stage of development of the metropole; and therefore, the kind of exploitation that will occur follows. Once the kind of exploitation is determined, then the kind of hinterland economy can be predicted. Initial differences among regions are influenced by different imperial policies. The role which a satellite plays in providing raw material products, a market for metropolitan manufactures, and additional investible funds is not seen as a function of technical considerations alone.

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1. Political union was not important in the neoclassical model since assumptions such as factor mobility would be unaltered. It is significant in the metropolis-hinterland framework if the relations among regions are altered.

We are now asking whether the establishment of a metropole within a country follows from the aforesaid analysis. Confederation implies the transformation of several independent regional imperial linkages into one major national linkage. Parallel to this transformation is the fusion of the separate political economies of several colonies into a federal political economy.

The timing of Confederation would be an important factor according to the metropolis-hinterland thesis. The stage of development of the world metropole is a crucial determinant of the transformation. By the time of Confederation in Canada, Britain was maintaining a laissez-faire policy. Laissez-faire empires still expropriated surplus in the process of exchange but the nature of the exchange of staples and manufactured goods was no longer exclusivist.[1] The free nature of exchange becomes important momentarily when we examine the response of the indigenous capitalist class, to the shift in Britain's policy.

The stage of development of the separate regions is also important because of the role played by the dominant class in the formation of political union. The merchant class was predominant in early Canadian history. This class was dependent upon the provision of raw materials in exchange for British manufactures. Their economic function enhanced their privileged position when Canada played an exclusive role as

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1. Naylor, Teeple, p. 31

supplier of several staples. Their economic power was threatened as Britain shifted its policy from a mercantile to a laissez-faire stance. Naylor contends that:

> "Canadian Confederation resulted not from a drive for independence led by a dynamic capitalist class but from the inability of the Canadian bourgeoisie to find a new dependency."[1]

While Britain favoured the 'liberalism' characteristic of the nineteenth century, Canadian Confederation and the subsequent national policy were mercantilist according to metropolis-hinterland theorists. Canadian development after Confederation until the end of the wheat boom may be characterized by consolidation and expansion of the nation-state along a strong east-west axis.

The economic separations of regions depends upon their interrelations. If the separate regions coming into union had initially held an equal satellite status with the world metropole, then there would be no a priori reason to expect one region to dominate another. If the regions maintained a differential satellite status, the most 'developed' region would become the national metropole and an hierarchy of regions would evolve under it.

Metropolis-hinterland theorists would define development as structural change from primary to secondary and tertiary[2] activity along with rising income per capita. In addition,

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1. Naylor Teeple, p. 12

2. Primary activity refers to agriculture and resource extraction, secondary activity is basically manufacturing, whereas public and private services are tertiary.

innovative capacity and entrepreneurial ability would be required to assure future development, but this element will be ignored in the present discussion. Frank hypothesizes that the closer the ties a region has with the world metropole, then the more underdeveloped a region will become. The satellite status of such a region may be said to be deeply established. Conversely, the region which is least integrated, which is not <u>solely</u> an exporter of primary products nor the <u>greatest</u> source of surplus to the world metropole, is most likely to develop some type of independent class. This independent class will utilize part of the surplus generated from primary exports to develop secondary and tertiary activity within the region. Such development reflects the ability to capture ancillary development (for instance, forward and backward linkages) internally.

Thus, the initial functional-structural characteristics of regions within the national economy depends on their relative stage of development. The dominant class in one region may be stronger, more independent, than the dominant class in another region. The capitalist class dominating the new national economy will emerge from the region where it was strongest. That region will have a more diversified industrial structure because of the degree of independence asserted by the dominant class. The region may be characterized as the national metropole.

If there are only two regions in the economy, we may classify them as national metropole and regional satellite.

Upon political union, the national metropole at least partially redirects the satellite region's activity from the world metropole toward national objectives. To the satellite, this implies the establishment of a new imperial linkage, or at least one of a different form, which transforms the nature and extent of its dependence. Thus, the national metropole will likely be the urban-industrial region while the regional satellite is more rural and staple-producing.

When the national model is extended to define the relationships among several regions it can be seen that they will align in a chain-like fashion. We assumed that the national economy is not metropolitan.[1] Since the national economy is a hinterland to the world metropole, then the national metropole is actually a sub-metropole. Its development should be greater than regional satellites but is confined by its dependent relation to the world metropole. In Frank's model this dependence is expected to yield underdevelopment through the drain on the economic surplus.

The main thrust of the linkage between satellites on the same chain is the appropriation of surplus. Most regions are both 'metropolitan' and 'satellitic' (exploiter and exploited) in terms of their relations with other regions. Frank makes the following observation about such regions:

> "....each of the satellites...serves as an instrument to suck capital or economic surplus out of its own

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1. If the national metropole was the world metropole, then the development predictions of the closed and and open model are basically the same direction, though differences in degree will arise.

satellites and to channel part of this surplus to the world metropole of which all are satellites."[1]

Implicit in the analysis is the notion that the satellite is able to continue to participate in the exploitation of its own periphery by accepting the exploitation by the metropole. It is not necessary, perhaps, for a national metropolis to accept its satellite status in order to exploit the regional satellite, but this seems to be the logical consequence of the system. We must examine the alternative possibility, relative independence, when we analyze the dynamic forces shaping national development.

Once the initial establishment of separate regions is determined, then the metropolis-hinterland thesis may proceed to examine the evolving spatial context of national development. We have noted the concern of socialist historians to determine the 'continuing character' of dependence among regions. We turn now to the task of elaborating the regional dimensions of those forces contributing to the continuing dependence. We will thus examine the interpretations of the evolving nature of national development offered by the thesis.

The Dynamic Process of Development in the Spatial Context

At any moment in time, the ownership and control of production directly affects the production and transportation

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1. Frank, Latin American: Underdevelopment or Revolution, p. 6

cost determinants. The metropole basically determines what will be produced and how it will be produced because of its innovative capacity and control over markets. Moreover, once it is determined who will utilize a particular resource, then where it is utilized is resolved. As time proceeds, then, the institutional framework of the world market determines the pattern of development such that cost reducing or product innovations are directed toward the maintenance and extension of the metropole's position.

We have noted how separate regions are differentiated initially. These separations are described in terms of differences in function and structure of economic activity. We will now evaluate the metropolis-hinterland explanation of the uneven development of regions over time.

The metropolis-hinterland thesis claims to explain why growth generating and degenerating forces exist within the spatial context. Explication of these forces thus explains the relative growth or decline of regions. Uneven development is a function of the historical interaction of the regions themselves as well as their relation to the world metropole.

Metropolis-hinterland predictions about the regional dimensions of national development require elucidation of (1) the nature of the hierarchy of regions,(2) the role of financial groups within the national metropole; and (3) the intensification of the metropolitan development process over time. We will examine these facets in order. The prime ob-

jective of this section is to delineate those forces attributed by Frank's thesis which explain the increasing concentration of production and the existence of depressed areas within an economy.

The basic cause of development in the metropolis-hinterland thesis is the generation and availability of economic surplus. The size and utilization of surplus available determines the region's ability to diversify its economic structure and raise per capita income. We have noted that the imperial linkage between two regions establishes the trade and investment ties yielding the metropolitan appropriation of surplus. The metropolis-satellite chain is, therefore, a surplus appropriation chain.

The nature of this chain requires greater explication. The changing structure and stage of development of the world metropole will have several implications for regional development within a satellite nation. The regional dimensions of development will depend on the extent to which the world metropole penetrates regional satellites directly or indirectly through the national metropole, and the degree of independence of the national metropole.

We may examine the contemporary evolution of the capitalist system in order to understand the evolving relations between the national metropole and regional satellites over time. The initial differentiation of the structure of the Canadian economy and earlier transformations of metropolitan capitalism are taken as given in the following discussion.

Naylor maintains that the international division of labour prevalent today--seen in terms of Canadian resource extraction, British finance capitalism and American industrialism--was established by the beginning of the twentieth century.[1]

The evolution of the direct investment empires of the American multinational corporations has replaced the old mercantilism of the British imperial influence in Canada.[2] The important facet of the contemporary evolution of the international economy is the increasing concentration of capital in the hands of a few. This concentration is represented by the centralization of productive activity within the spatial context.[3] Such centralization is rooted in imperialism. Lenin defined imperialism as the rule of finance capital in which banking and industrial capital are fused.[4] The multinational corporation is the modern organization in which the export of capital plays a part in the creation of an "international network of dependence and connections of finance capital."[5]

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1. Naylor, Teeple, p. 23.

2. Kari Levitt, Silent Surrender (MacMillan Company of Canada; Toronto: 1970) pp. 23-25.

3. Frank, Capitalism and Underdevelopment in Latin America, p. 8

4. Nikolai Lenin, Imperialism, The State and Revolution (no publishing information other than preface: Petrograd, April 26, 1917) p. 72

5. Ibid., p. 46ff

How this international network influences the regional dimensions of hinterland development is the focus of our study. Stephen Hymer states that:

> "The expansion of the multinational corporation involves a double movement. On the one hand, it spreads capital and technology. On the other hand it centralizes control by establishing a vertically integrated network in which different areas specialize in different levels of activity."[1]

The crucial point is how a region's 'level' of specialization is determined.

The network of economic activity evolves into the surplus appropriation chain according to the level of decision performed by the various branch plants. The geographical representation of this network is an hierarchy of city-centred regions consisting of satellites, sub-metropoles and metropoles. The economic activity of these regions thus reflects the various levels of decision-making within the multinational firm. High levels of decision-making, involving, more abstract levels of planning and longer time horizons, are centralized in the metropole. Lesser cities within satellite regions deal with the 'day-to-day' operations of specific local problems.[2] Thus, even though activity is dispersed, the functional-structural hierarchy of regions prevails

At the risk of oversimplification, direct foreign invest-

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1. Stephen Hymer, "The Multinational Corporation (Your Home is My Home)", Canadian Dimension, VIII, (March-April 1972) p. 33

2. Ibid., p. 35

ment may be generally classified into two groups. First, foreign capital is often invested in branch plants. Subsidiaries usually assemble parts from the metropole but may produce separately. Production of goods comparable to the parent corporation's output is generally limited to the domestic market. Second, investment in primary resource extraction provides access to raw materials which are shipped for further processing in the metropole.

Branch plant manufacturing may be centralized within the national metropole.[1] The level of decision making is basically managerial rather than entrepreneurial. The branch plant does not decide matterns concerning the overall market strategy[2] of the corporation. The property income flows toward the parent corporation pay for its entrepreneurial role as product innovator and market strategist.

Thus, the proliferation of manufacturing subsidiaries in the hinterland extends the domination of the metropole and the dependence of the satellite, Even when the subsidiary is more than an assembly plant, it often remains dependent on the parent for essential machinery and equipment parts, market outlets, and research and development.[3] The production-consumption patterns and resulting export-import content of

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1. Jim Laxer, "Manufacturing and U.S. Trade Policy", (Canada) Ltd., Robert Laxer, ed., (McClelland and Stewart Limited; Toronto: 1973) p. 129.

2. Kari Levitt maintains that market strategy is the major determinant in the investment decision (op. cit, p. 80). Managers of branch plants must take these as given and try of optimize short-run operations.

3. Levitt, pp. 79-82.

satellite and metropole reflect the profitability and growth requirements of the multinational corporation.

Direct investment in raw materials may be dispersed throughout the hinterland economy. Therefore, the national metropole will be involved with both manufacturing and primary production. However, regional satellites are basically dependent on resource extraction alone. This is significant because the mechanisms of imperialism relevant to investment in raw material sources are most important. The metropolis-hinterland thesis predicts the outflow of property income in the form of profits and dividends will be greater in the long run than the capital inflow of the original investment.[1] That is, surplus is expropriated by the metropole. Therefore, the satellite must produce a greater output than it consumes in the production process.

The portion of surplus generated by primary production which is captured by the satellite is reduced by the administered cost and selling prices of vertically integrated firms. The corporation sets the price of inputs lower than what the market value would be in a competitive market for several reasons. A lower price reduces the proportion of surplus which could be extracted by the satellite region and its government

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1. Safarian's criticism that the direct contribution of the multinational corporation to the region should be evaluated instead of the resulting inflow-outflow ratio is important. His argument is valid if such investment provides the region with income and employment which is greater and/or superior to domestic potential. If it replaces comparable indigenous developments, it is irrelevant. Further research is required to resolve this presently hypothetical issue. See A.E. Safarian, "Foreign Investment in Canada: Some Myths", Journal of Canadian Studies, VI, (August 1971) pp. 6-8.

in the form of taxes reduces foreign exchange risks, and improves the global profit position of the multinational corporation.[1]

The locational decision of the multinational corporation is determined by its market strategy. The impact of market strategy on the hinterland economy depends on several factors which influence the long-run profit expectations of alternative locations. The competing and complementary resources available elsewhere, and the monetary return and external economies relative to both monetary and opportunity costs of a particular investment influence the location.[2] As financial resources become internalized and control over production becomes integrated, then the centralization process of the highest stages of production can be intensified.

Thus, the evolving structure of the international economy leads to the polarization of the economies involved. The farthest outpost within the region is confined to the production of primary products and limited managerial decisions. The economic surplus generated by its activity is drained into the regional, national and world metropoles. As one moves up the metropolis-satellite chain, a greater proportion of economic surplus can be expropriated by the privileged classes therein. Presumably, the more control over development decisions is coincident with increasing

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1. Levitt, pp. 79-80

2. Norman Girvan, The Carribean Bauxite Industry, (Institute of Social and Economic Research; University of West Indies; Jamaica: 1967) p. 17.

metropolitan features.[1]

The metropolis-hinterland thesis predicts that the hinterland government and the dominant class will aid the polarization of regions. The hinterland government aids the process by making concessions, loans from the central bank, direct incentive grants to the foreign investor and infrastructure development support in order to attract capital to the satellite region.[2] The indigenous capitalist class expropriates part of the economic surplus from the direct producer in the form of rents and higher prices. The role of the middleman seems especially important in increasing the price gap between primary producer and consumer (or between capital goods manufacturers and others dependent on those goods for their own production).[3]

We will now undertake a more detailed discussion of the role of the indigenous capitalist class to better understand the size and utilization of surplus among regions. Although the metropolis is not expected to encourage industrialization in the hinterland, it is curious that the indigenous capitalist class does not. Naylor maintains that the dominant class in Canada was a group of mercantile-financial capitalists rather than industrialists.[4] Thus indigenous develop-

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1. Naylor, p. 31.

2. Watkins, "Resources and Underdevelopment", Laxer, p. 12.

3. Frank, Capitalism and Underdevelopment in Latin America, pp. 106-115.

4. Naylor, p. 3

ments were directed in the interests of those appropriating surplus in the process of exchange rather than production. Not only did the transportation, and financial infrastructure become overdeveloped; but the increased requirements for liquidity drained funds away from industry.[1]

Whether or not Naylor's distinction between industrial and mercantile-financial capitalists is valuable requires deeper assessment elsewhere. For the moment, we may accept the argument that the financial groups played a determining role in Canada's absorption into the world market. The Park's note that:

> "The financial groups dominant in Canada maintain their power through a complex institutional structure by means of which other people's money, the savings of the people, is centralized, mobilized and controlled on behalf of the financial groups."[2]

Given this powerful access to the financial resources of the nation, the financial groups may maintain control over wealth producing companies. They seem to have chosen to control those companies which perform complementary functions to foreign interests. Teeple argues that:

> "Most of the large concentrations of Canadian capital today perform complementary (or at least non-contradictory) roles in relation to U.S. capital--the form of which is more powerful because it dominates the sphere of production, while Canadian capital prevails

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1. Naylor, p. 21.

2. Libbie and Frank Park, Anatomy of Big Business, (James Lewis and Samuel, Publishers; Toronto: 1973: 1962) p. 71.

> largely in circulation, that is, in transportation, communication, retailing, and finance."[1]

By performing this complementary function, Canadian capitalists may share in the appropriation of surplus without challenging the position of the world metropole or being challenged by it.[2] Thus, the concentration of merchant and finance capital within the national metropole is effectively a cause and effect of the complementarity in functions between the world metropole and the particular hinterland economy.

It would seem that the world metropole may penetrate a regional satellite either directly or indirectly through the national metropole. Direct integration may be best characterized as the complementarity of production-consumption relations. The regional satellite produces raw material inputs for the world metropole in exchange for highly manufactured consumer and capital goods. These goods may be physically channeled through the national metropole though this is not necessary. From the viewpoint of the world metropole, a major function of the national metropole is to extract its share and channel the remaining surplus between the regional satellite and world metropole.

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1. Teeple, p. xi.

2. The strength of the Canadian banking system, through legislation ..., has prevented the complete fusion of industrial and financial operations by the world metropole from occuring in Canada. John Hutcheson notes that industrial capitalists must share their capital, accumulated by controlling the means of production, with mercantile-financial capitalists because they help concentrate capital resources and aid distribution. This may explain the alliance between foreign and domestic capitalists in Canada. See Hutcheson, Laxer, p. 75.

The extent of economic activity within a region partly depends on the nature of its relations with other regions. Two regional satellites are in competition for investible funds whenever their endowments are comparable. Allocation of foreign funds generally has a geographic specific destination. When a range of locations is conceivable, then the bargaining position of different regions may be influential [1] The impact of governmental policy on the overall pattern of development is of secondary importance however.

The economic activity of either the national metropole or regional satellite is conceived as strictly complementary to the world metropole. Most economic relations between the national metropole and other regions are likewise corresponding. It is possible that some functions of the national metropole and regional metropole are competing. Since a national metropole is also a satellite, it is vying for part of the foreign capital to be invested in the country.

The degree of competition for investment funds among regions will depend on resource and factor endowments, stage of the production process and the production technique to which the capital is to be applied. In other words, if the alternative locations are highly substitutable, then regional competition is raised. In general, traditional patterns of

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1. This prediction is an adaptation of Aitken's arguments in "The American Impact on the Canadian Economy". The important point derived from his analysis is simply that the apparent success of governmental policy depends on the juxtaposition of favourable circumstances outside its control as much as anything else.

economic activity have tended to differentiate regions. For instance, the lack of infrastructural developments, labour force and proximity to markets prevents a raw material in one part of the country from being the economic resource that it is in another part.[1] The competition among hinterland regions is generally resolved such that economic concentration and disparity are reinforced.

The important point brought forth by the metropolis-hinterland thesis is that complementarity in economic structure between the national metropole and regional satellite is likely to prevail. There are underlying conflicts among regions in competition for the allocation of investment funds. Even so, the observed complementarities result from the national metropole's direction over development in peripheral regions.[2]

At this juncture an important modification of Frank's thesis is raised. If the national metropole's directing hand is somewhat independent of the world metropole, then the existing complementarities between the national metropole and the regional satellite may be reduced. The peripheral region may then become satellite to two <u>competing</u> metropoles

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1. <u>Falconbridge:</u> A report to the InterChurch Task Force on Dialogue with the Corporations (March 1974) pp. 3-4.

2. One would suppose that in the Canadian scene, as North-South ties replace the East-West conception of the National Policy, the regional conflicts will increase and national integration diminish. See Levitt, pp. 32-40.

rather than a world metropole and sub-metropole performing complementary functions.

It is beneficial to pursue the dual role played by the national metropolis. As a sub-metropole, it fits somewhere in the middle of the metropolis-satellite chain. It is possible, however, for the dual nature of a national metropolis to be of another form. Many of its functions may very well place it in the middle of the dominant surplus appropriation chain. At the same time, it may perform independent functions as a metropole which is not subordinate to the world metropole. In this case, it may be positioned at the apex of a separate hierarchy of cities and regions: in a functional sense, if not a structural way.

For instance, many 'Canadian' operations in the Carribean are really extensions of American dominance. In contrast, Canadian banking operations are independent in terms of the strategic decisions and functions performed, the appropriation of surplus and the resulting development and underdevelopment pattern. The second possibility, the relative independence of some functions, was not considered by Frank because it is not common in Latin America.

The possibility that some sectors of the Canadian economy may be independent will alter the predictions of the model. Unfortunately, it is difficult to evaluate the importance or degree of independence of these sectors. Even though the Royal Bank and Bank of Nova Scotia act independently to extract surplus from the Carribean and appropriate

their investments according to abstract plans and long-term horizons (the highest level of decision); in their Canadian operations their decisions may depend substantially on the decisions of multinational corporations representing the interests of the world metropole. More research into the nature of the linkage between the metropolis and satellite pertaining to Canadian-American relations is therefore required.

In general, however, the relationship between domestic and foreign capitalists may be appropriately described as symbiotic.[1] The dynamic ramifications of the symbiosis illustrate a curious anomaly. The satellite exhibits the affectations of underdevelopment and, thus, appears to be the parasite. In actuality, the metropole is parasitic in terms of requiring raw materials and capital funds from the satellite in order to maintain its own development.

Model Implications and the Process of Regional Adaptation

We have noted the delineation of regions into the national metropole and various regional satellites. We would now like to pursue the consequences and implications of these metropolis-satellite relationships at the sub-national level.

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[1] For example, The Royal Commission on Canada's Economic Prospects states: "Canada and the United States live in a kind of symbiosis--two organisms separate and distinct, each with its own ends and laws; but highly interdependent, indissolubly sharing the same continental environment and, in spite of a greater disproportion of wealth and economic power, each necessary to each other." p. 35

The Park's list several national consequences of the relationship between the foreign and domestic capitalists. These are:

> "the growth of national industry suffers, the development of the country is distorted to suit the profit position of foreign monopolies, the content and direction of the country's trade will be affected by non-national considerations, and profits are in part taken out of the country (a drain on balance of payments) and in part re-invested and used to extend the control of the outside group."[1]

What, then, are the regional effects of the maintenance of power through the penetration of foreign monopoly interests? What are the consequences of the concentration of economic activity in the urban-industrial region, the metropole? What are the implications of the dominance of rural-staple production for the satellite regions? What are the spatial dimensions of the poor growth performance of national industry, the distortion of development and the monopolization of markets?

That growth of national industry suffers, implies that there is less domestic industry than there could be at any moment in time and that future growth potential is reduced. All regions will participate in the production process less than they would if their access to surplus funds were greater. They cannot initiate greater industrialization without the allocation of more investible funds in their region. The industrialization which does take place will be concentrated

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1. Park, p. 1

in the national metropole. This allocation of funds will be a function of the market strategy of foreign and domestic capitalists.

There are two major implications of the centralization of economic activity within the hinterland nation. First, the national metropole will continue to maintain the extent of its domination over productive activity relative to the regional satellites. Second, the nature of this participation may, however, become increasingly dependent as the foreign monopolization of markets expands.

The nature of concentration throughout the international economic system is examined by Hymer. He states:

> "This system implies a continuous dichotomy between major and minor centres--the former continuously innovating and dispersing activity to surrounding areas, the latter having continuously to adjust."[1]

The independent sectors of a national metropole will be the most dynamic in an hinterland economy. They will initiate changes which alter supply and demand parameters and disperse investment activity accordingly. For the most part, however, the national metropole responds to changes initiated by the world metropole.

Because of its satellite status to the world metropole, the national metropole will compete for investment funds against regional satellites. Yet, the national metropole is expected to be more successful in attracting a greater volume and more advanced stages of production. This is because

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[1] Hymer, p. 47

larger markets are favoured over time. Proportionately more income and employment is generated in the metropole in a cumulative fashion. Frank's thesis maintains that the metropole has control over the economic surplus through the monopolistic market structure. This control presumably determines the innovations which are pursued. Such innovations determine the changes in production costs at alternative sites through the allocation of investment.

The Park's note that the satellite nation's development is distorted to suit the global position of the world metropole as foreign investment increases.[1] We interpret this to mean that the income and employment generated per dollar of investment is reduced in the satellite economy. While this impact is felt throughout the national economy, it is particularly strong in regional satellites.

Poverty and unemployment in satellite regions are structurally determined. Reliance on export staples without inducing subsequent manufacturing means that future employment is exported along with the raw material. This important consequence of the trade and investment ties is attributed to the reduction of potential economic surplus due to the subsequent structural underdevelopment of the satellite. A satellite which participates in the production process in a

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1. It would seem that once infrastructure is well established and industrialism is obvious, as in Ontario, there should be no shortage of capital since a large surplus should be generated from these kinds of activity. Yet, the national metropole continues to encourage foreign investment as much as peripheral region.

limited way through minimal processing does not yield the greater value-added which is generated at additional stages of production.[1] Proportionately more income and employment is generated in the metropole for each additional job created in primary production. This explains why income and employment are said to be exported along with raw materials whenever direct investment is concentrated in resource industries.[2]

The regional satellites are especially vulnerable to market fluctuations in the international economy. When the supply or demand for a particular staple is exhausted, then the region which did not diversify is left as a wasteland. These depressed regions may be re-exploited during growth periods of the metropole. The structurally underdeveloped and high unemployment regions thus perform an important function beyond market dependency and complementarity. Cy Gonick analyzes this additional role as follows:

> "A sudden spasm of growth requires a surplus labour force which can be mobilized at reasonable wages. Depressed regions furnish a reserve army of labour that is mobile and available at relatively low wages."[3]

Thus, reliance on capital imports leads to limited job creation except in times of rapid growth.

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1. See Girvan for an illustration of the influence of multinational corporations of satellite regions.

2. Watkins, "Resources and Underdevelopment", Laxer, pp. 121-126.

3. Cy Gonick, "Metropolis/Hinterland Themes", Canadian Dimension, VII, (June 1971), p. 26.

Beyond the structural-functional polarization of economic activity, the metropolis-hinterland thesis predicts the persistence of regional income differentials. Differences in returns to capital and labour are a function of the development decisions of the regions involved. Hymer specifies the determination of the level of decision as the crucial element of domination within the multinational corporate framework.[1] The metropolitan interests decide the location of productive activity. Final products, not produced exclusively in the world metropole, are produced in the national metropole. The most advanced techniques are employed there. Raw materials and intermediate good production are allocated through investment to competing satellite regions. Thus, the commercial network and the appropriative decisions of the monopolistic interests in the metropole perpetuate regional differences in the relative productivity of labour and capital.

The dominant class in the national metropole is expected to collaborate with the world metropole in the allocation of productive activity within the hinterland. We may illustrate the logic of regional income polarization in the following arguments. If a high wage region can assure that the demand for its export goods is rising, then the region will continue to grow--a proposition verified by the export base theory. It would therefore be in the interest of the metropole to

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1. Hymer, p. 34.

perpetuate its relative 'attractiveness' by: 1) reducing the proportion of inputs required per unit of output, especially if those inputs are imported from other regions; and 2) discouraging production in other regions of goods which would compete with its production, particularly in high value-added sectors, so that other regions are dependent on that region for its output. Such dependence should lead to growing demand for the high wage region's exports relative to its demand for imports. A corollary to 2) is that the region must control vast reserves of raw materials or else the demand price may shift to the other region's favour.

The above assertions are implied by the metropolis-hinterland thesis. Naylor's classification of empires indicated a similar relation between metropolis and hinterland in which the metropolitan or urban industrial-region asserts its dominance by determining the allocation of investment funds. The metropole thus tries to perpetuate the manufacturing import/raw material export of the hinterland.

The capacity of some rural-staple regions to generate full employment will be diminished whenever production is shifted away from the export base or more capital-intensive techniques are applied. The governmental policies of these satellite regions may respond to these shifts in a way that encourages the persistence of income disparities. Regions which experience high unemployment often use low wages as an attraction for labour intensive industries. In times of industrial expansion this is effective in attracting some

foreign capital; but it is at the expense of creating a permanent low wage condition.

Leo Johnson, who examines specializing tendencies of investment among regions, emphasizes that disadvantages are perpetuated in the low wage region. He explains that because capital intensive facilities are costly to operate below optimal output levels, manufacturing production is concentrated there when volume falls off. Because labour costs rise in highly capitalized firms, part of the production process is transformed into labour intensive lines and dispersed to the hinterland which thereby becomes increasingly dependent.[1]

We have noted that the relations and separations of regions are a function of the evolving structure of the entire capitalist system. The evolving structure exemplifies an hierarchy of regions the development of which depends on the direction of the metropole and the relative response of competing satellites. The concentration of economic activity leading to the development of the national metropolis is a function of its accessibility to the economic surplus generated within its own region and other satellites.

The existence of growing satellite regions which are predominantly agricultural or resource extractive is explained by the dependence on the national and world metropoles for

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1. Leo A. Johnson, "The development of class in Canada in the twentieth century", Gary Teeple, pp. 173-174.

investment, technology and manufactured goods in exchange for their raw materials. Their development is curtailed. The fate of such satellites is foretold by existing depressed areas which grew but did not develop in the past. When external shifts in supply and demand reduced the importance of their export base, these regions experienced decline and underdevelopment.

The growth of a region is limited by its satellite status within the metropolis-hinterland chain. Those regions at the bottom of the chain experience the greatest proportionate drain of the economic surplus which is generated. Those regions at the apex of the hierarchy draw the greatest proportion of economic surplus.

The most important prediction of the thesis is yet to be uncovered. What are the implications of the polarization of economic activity and income for the process of regional adaptation? Concentrating the discussion on the expropriation-appropriation of actual economic surplus disregards the differential impact on potential economic surplus. The outflow of human, natural and capital resources from the satellite leads to the structural underdevelopment of the region. Inaccessibility to much of the surplus generated reduces the ability to transform the saving into profitable investment. Reduced investment expenditures (with the exception of reinvestment by the metropole in order to generate greater outflows as well as secure the supply of resources) means that the potential economic surplus is reduced.

Future development is hampered because present development is distorted. This is extremely important. Without the transformation of the region into a more diversified structure, the region's growth remains dependent on the metropole for investment, markets, technology and high-valued goods. If the metropolitan interest in the satellite subsides, then the growth of the region will likely decline. It is unable to adapt unless other resources are readily accessible and exploitable.

Therefore, the growth of the satellite is neither self-perpetuating nor self-generating. This is the crucial prediction. The implications are manifold. First, the growth will not necessarily lead to structural change or development. Second, since the growth is basically under the control of foreign interests through ownership or monopolistic buying power, the regional interests are rarely imputed effectively in any allocative decision.

A third implication needs a more detailed examination. The satellite's adaptability or response ability is limited to shifts in export base. The region does not initiate change. Further, when external shifts in supply and demand adversely affect the region's export base, the region may not be able to adapt. A rural-staple satellite can adapt only to the extent that it can exploit other natural resources since, presumably, major ancillary developments were not induced previously.

The larger and more diversified markets of the metropoles

are naturally more adept at marketing goods already produced. They are then able to shift from past opportunities to new opportunities more rapidly than regional satellites. The urban-industrial regions attract capital because of real economic advantages represented by their characteristic productive activity. However, the dynamic nature of these capital market outlets goes beyond functional-structural features which distinguish the national metropole from the regional satellite and, more importantly, the world metropole from the entire hinterland economy.

Kari Levitt uses Schumpeter's definition of development as a function of "endogenous entrepreneurial initiative and innovation"[1] to derive the dynamism in the system. She notes:

> "When the emphasis is placed on endogenous entrepreneurial initiative metropolitan economies are seen as sources of development (active); hinterland economies as places of production (passive)."[2]

Thus, even if growth in income per capita and structural change are evident in the national metropole, it may not play an active role in the development. Establishment of domestic manufacturing is more often an indirect response to external

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1. Levitt, p. 25. The value of this definition is enhanced when one is concerned about flexibility. Associating growth and structural change as the basic definition of development is conditioned by present trends--mostly applicable to a mass consumption efficiency-oriented society. Initiative plays a determining role no matter what societal values are predominant.

2. Levitt, p. 26.

demand. It supports the extraction of exports to the world market.

The nation's ability to initiate change depends on the degree of independence exercised by the national metropole. The national metropole should not rely on foreign-based international corporations to stimulate development within the economy. These corporations will develop but, in the process, satellite economies become increasingly dependent. Only at the centre of innovation and entrepreneurship, therefore, is growth self-generating.

Summary

The metropolis-hinterland framework is basically historical-analytical. It hypothesizes the major forces of growth and development in the context of the capitalist economic system. Although the hypotheses support observed trends, the relatively unspecified character of the world market makes the model elusive to a thorough criticism without further historical detail. However, several strengths and weaknesses may be pointed out.

The metropolis-hinterland thesis predicts the initial interest and consequent developments in a region on the basis of metropolitan decisions. The nature and extent of trade and investment will depend on the requirements of the metropole, its stage of development and the imperial linkage which is established. Technological and geographical factors

are not thoroughly specified within the general framework. These factors would require greater historical detail whenever the model is applied to a specific context.

The dynamic forces which shape the spatial context in Frank's thesis seem to be fundamental. The development decisions and innovative capacity of the metropole are primary. Once the relations among regions are specified, then the model claims to predict the spatial configuration of the evolving capitalist system. The relative development or underdevelopment of a region is a function of its status within the metropolis-satellite chain because this status determines its accessibility to the economic surplus. The freedom of a region is confined to development decisions concerning the utilization of its share of the economic surplus. The regional share is mostly determined by the allocative decisions of the metropole which exerts and maintains its monopoly power.

Frank's thesis explains the concentration of economic activity and the persistence of depressed regions at the same time. The simultaneous development of 'overdeveloped' and 'underdeveloped' regions is a result of the existing structure of economic power. Uneven development is inherent in the system. Therefore, the differential ability of regions to adapt is the logical consequence of the expansion of the commercial network.

It seems clear that the strength of the metropolis-hinterland framework lies in its analysis of the process of

regional adaptation. It is important to distinguish between regions which initiate change, metropoles, and regions which must adjust to original shifts in supply and demand. However, one word of caution is in order.

We have noted the significance of development decisions in the metropolis-hinterland model. These decisions would be important in any analysis of the institutional framework of the market. Yet, by observing the effect of certain policies, many who have accepted the hinterland-metropolis theme tend to assume the intent. In other words, they assume that the effect was intended or that the intent was realized.[1] While they may be correct, there is no guarantee that this is a valid assessment of the situation.

1. Both Naylor's and Archibald's work with regard to the National Policy illustrate this supposition.

CHAPTER FOUR

A COMPARATIVE EVALUATION

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Introduction

A major premise underlying this thesis is that development theory must incorporate the analysis of economic relations between geographical areas and the economies of spatial separation. Explicating the regional dimensions is essential to understanding Canadian economic history. Development theory and analysis of the historical process is enhanced by the specification of the spatial context since regions do not evolve in isolation.

Our objectives were to explain the segregation of regions according to functional-structural characteristics and the development of rich and poor regions. We examined how the theories would explain the growth and decline of regions, the pattern of income differentials, and the process of adjustment over time. Now that we have reviewed two analytical frameworks we may better assess their contribution. The different perspectives of the neoclassical and metropolis-hinterland thesis makes a comparative criticism especially interesting.

We will examine the theoretical explanations of observed trends in the spatial context of national development. The intention is to compare and contrast the neoclassical and

metropolis-hinterland predictions concerning the division of labour, the concentration of economic activity, and the persistence of regional disparities. Most importantly, we are interested in the implications provided by the two theories. We will then examine the process of regional adaptation. A final section evaluates the major policy implications.

Regional Specialization and Development

To illustrate the different theoretical interpretations it is useful to look at the historical evolution and comtemporary economic activity of two distinctive regions within Canada. We will refer to the development of the Maritimes and Ontario[1] as characteristic of a rural-staple and an urban-industrial region, respectively. Both were initially staple regions to the United Kingdom. Even so, Ontario and the Maritimes have developed into different types of economies. Even by the time of Confederation Ontario had become more populous. Interior transportation and other infrastructure were better. The commercial class was stronger and more developed. Why did differences in regional participation in the nation's economic development evolve?

We may ask, for instance why Ontario was able to transform from its colonial staple producing status with Britain

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1. It would be more correct to refer to a Central Canada region than Ontario alone. If Central Canada were considered as Southern Ontario and the Montreal area of Quebec, then a more homogeneous 'urban-industrial' region would be depicted. Northern Ontario, on the other hand, is more like the typical rural-staple region.

to its presently dominant position in the national economy. While the transition from the Ontario wheat economy to the national manufacturing centre is a function of both technological and institutional advances, is it not possible to specify the most important forces shaping its economic development?

The neoclassical approach would analyze the importance of the resource base of individual staple products. The kind of staple located in a geographic area, and the technological requirements for its exploitation are the essential determinants of a region's development. The former determines the importance of a region's export base, the region's comparative advantage, while the latter determines the extent of ancillary development. One would presume, then, that Ontario's specialization in fur, timber and agricultural production created more production and demand linkages than Maritime fishing and shipping. The social overhead capital and ancillary manufacturing required would consequently be greater.

Once the initial metropolitan interest is determined, the metropolis-hinterland thesis would alter the neoclassical predictions concerning the nature and extent of ancillary development in a region. Commodity and factor exchange relationships reflect the development choice of the metropole and the responsiveness of the indigenous population in the outlying region. Therefore, the development stage of capitalism is important. The location of forward and backward linkages depends on the extent of the imperial linkage of the hinterland to the metropolis.

One of Frank's hypotheses is that the region with the closest ties to the metropole will remain the most underdeveloped when metropolitan interest diminishes. Such trade and investment ties are imperialist in nature. Therefore, the closer the ties, the stronger is the domination and exploitation of the satellite region by the metropole. Foreign investment in the production of staples[1] leads to the export of these goods as inputs in exchange for the output of the metropolitan production process. Close ties, which specify the imperial linkage, thus imply strong complementarities in economic activity and a rate of exchange, however determined, which disfavours the satellite inordinately.

The metropolis-hinterland modification of locational linkage becomes important when we express dissatisfaction with the neoclassical predictions concerning the eventual diversification of some regions and not others. Is regional diversification into new staples and expansion of the industrial base merely a function of a better resource base? If not, how does one explain why several potential economic resources remained unexploited or unprocessed in the Maritimes but were produced in Ontario?[2] The metropolis-hinter-

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1. Or in the contemporary case, the investment in branch plants assures a continuous demand for metropolitan capital goods and parts as well as technology, managerial skills, marketing outlets and so forth.

2. Coal and iron ore, timber, and gypsum for example. See S.A. Saunders, Studies in the Economy of the Maritime Provinces, (Macmillan Company of Canada Limited; Toronto: 1970) p. 245.

land model, tries to answer the second question. It states that regional differences in adaptive ability determine the extent of development once initial settlement takes place.

Adaptive ability is basically a function of innovation and entrepreneurship. Therefore, the generation of functional-structural differences over time depends on where the domestic entrepreneurial class develops and its role in the international economy. According to the metropolis-hinterland theory, Britain's imperial linkage with the Maritimes would have wielded closer ties than that with Ontario in the early development stages of these satellite regions. The Maritimes would have had less access to the surplus generated by fishing since it developed during the early and strong Mercantilist period. Maritime fishing was the major source of supply and therefore extremely important to the world metropole. In addition to the expropriation of surplus, local developments were not necessary nor pursued.

In contrast, again in accord with Frank's thesis, indigenous developments of Ontario agriculture were possible on the basis of surplus accumulated from fur, timber and the land itself. The integration of Ontario into the world capitalist system was weaker than the Maritimes. Ontario agriculture developed when Mercantilism was declining. Metropolitan interests were not founded on exclusive sources of supply since there were many competing agricultural areas throughout the world.

Since internal expropriation of surplus was possible,

it could be allocated toward new opportunities in the region. A domestic capitalist class in Ontario became strong relative to a comparable group in the Maritimes. Thus, while initially dependent on the external markets, Ontario was apparently able to expand its domestic market. Its development decisions were not completely determined by the allocation of investible funds by the world metropole.

The greater development of Ontario around the time of Confederation may be explained by the metropolis-hinterland thesis. There were some active indigenous developments in the Maritimes prior to Confederation on the part of the merchant class once British interests in the colony diminished.[1] However, most of these developments were directed toward the sea and limited timber exploitation despite potentially good agricultural land. Furthermore, any sort of 'comparative advantage' in transatlantic steam shipping was not pursued after initial developments by people such as Samuel Cunard.[2] This is a significant observation since iron ore and coal were deposited in the Maritime region.

In the meantime, however, the commercial interests of Central Canada predominantly influenced the national policy. Tariffs, railroad building and Prairie settlement were directed toward integrating the regional economies into a

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1. See H.T. Easterbrook and Hugh Aitken, "The Maritime Provinces: 1815-1867, Canadian Economic History, (The Macmillan Company of Canada, Limited; Toronto: 1970: 1956) pp. 227-252.

2. Easterbrook and Aitken, p. 244.

strong national political economy. The complementarities in economic activity were essential to the national economy. According to the metropolis-hinterland thesis, the Maritimes thus transferred their dependence from Britain to Ontario because of their inability to adapt to prevailing economic changes, not because of a poor resource base.[1] This argument seems much more acceptable than the traditional presumption, but requires much more historical empiricism than previous studies have shown.[2]

Differences in entrepreneurship and economic power based on the ownership and control of markets thus explain the evolution of Ontario into the urban-industrial centre and the continued Maritime participation as a rural-staple region. Entrepreneurship and economic power are dynamic forces which shape the evolving map of economic activity. The stage of development of the external and internal metropoles determine the spatial endowment and cost configurations of the entire hinterland economy, and consequently, the specialization of individual regions. Furthermore, such specialization will change as the metropole shifts its economic activity, input requirements, and market outlets over time--a matter to be pursued momentarily.

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1. Iron ore and coal were developed for the railroad requirements of western expansion. Iron works eventually shut down, however, and the raw materials were shipped for further processing in Hamilton, Ontario.

2. See Bruce Archibald, "Atlantic Regional Underdevelopment and Socialism", Essays on the Left, Laurier La Pierre et al, ed., (McClelland Stewart Ltd.; Toronto: 1971) which inadequately applies the metropolis-hinterland thesis.

Thus, whereas specialization in the neoclassical framework <u>reflects</u> differences in factor endowments and relative prices; in the metropolis-hinterland thesis, specialization and utilization of factors are <u>directed</u> by the appropriative decisions of the metropole. In the neoclassical model, the division of labour is determined spontaneously by independent market forces. In the metropolis-hinterland model, the interaction of supply and demand forces underlying the division of labour is actively determined by monopolistic interests.

It is significant that specialization is passively determined in the neoclassical framework and actively determined in the metropolis-hinterland thesis. Technological and geographical determinism are basic in the former. Imperialism is the decisive force in the latter. The resulting predictions will be different to the extent that the profit-maximizing location between two regions is altered by the centralization of ownership and control.

The difference in approach between the two theories is also illustrated when one considers the development of forward and backward linkages in the satellite region. If the export staple were developed indigenously rather than by an external capitalist economy would the degree and direction of regional development be different? One would suppose that the alternative revenue-cost conditions, including transportation costs, between the satellite and metropole would indicate a unique profit maximizing location. Assuming the

firm is rational and profit-maximizing wherever it is based, the location decision should be the same for the metropolitan-based firm and the satellite-based firm.

The above arguments are altered when the concentration of ownership and control is incorporated into the model. The cost-revenue situation may be different if distinct agents own various operations instead of one corporation or group of related corporations. Even if the behavioural assumptions are maintained in both cases, the decision parameters may be different. The integrated firm may incorporate greater costs and revenues in its accounting than the separate firm--its horizons are necessarily broader.

For example, the cost-revenue situation of the independent metal producer may favour the satellite location such that further processing is adjacent to the mine. A vertically integrated operation might not be drawn to the raw material site beyond extraction of the mineral.[1] The independent firm would assess the situation according to the optimal input-location configuration for a smaller output range than the integrated firm. A large corporation may combine several types of metals to various kinds of output. If the mining operations controlled by the integrated corporation are located in several regions, then the central metropolitan location may minimize total costs relative to

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1. For example, nickel extraction in the Sudbury region, or the gas and oil industry of Alberta export materials in a relatively unprocessed form. See Falconbridge: A report to the Inter Church Task Force on Dialogue with the Corporations (March 1974), pp. 1-14.

total revenues. In this case, centralization of production results. The forward and backward linkages generated from the opening up of the satellite's new export base enhances the market pull of the established metropole.

It is quite conceivable that the independent firm might also ship raw materials for further processing in the metropole. This argument, which implies no difference in locational orientation between the independent and integrated firm, is essentially static. It takes the existing pattern of industry and population as given at any moment in time. The metropolis-hinterland thesis hypothesizes the spatial dynamic context evolves according to the distribution of ownership and control. The spatial context influencing location decisions is 'given' at any moment, but is not a given in the dynamic context. The spatial context would be different today and in future, if the monopolistic structure did not evolve the way it has up to the present. Consequently, individual location decisions would be different.

It is clear that the question of the location of linkages needs to be pursued much further. Whether the metropolis-hinterland thesis would alter the static predictions of the neoclassical approach by considering the organization of ownership and control is still unresolved. However, the importance of incorporating the monopolistic forces which shape the evolving map of economic activity will become evident when we discuss the process of regional adaptation.

The predictive power of the metropolis-hinterland thesis is enhanced by its effective explanation of the historical context of development. In contrast, specification of locational orientation in the neoclassical framework explains the location of ancillary development only to the extent that technological advances reflect and reinforce institutional advances. It does not examine the evolving nature of the underlying institutional forces.

Actually, the inter-related nature of technological and institutional advances must be emphasized. Examination of one set of forces without the other limits the explanatory effectiveness of either theory. Our criticism of neoclassical theory at this point, however, is that it describes regional specialization without specifying how change is initiated, or set in motion, over time. We will now examine the dynamic implications of regional specialization with this passive versus active distinction between the two theories in mind.

How do the two models explain the increasing concentration of economic activity within the national economy? In the neoclassical framework secular concentration is described but not really explained. The combination of technological economies specified above and market demand result in a competitive edge for the region encompassing the larger market. This competitive edge is a function of larger capital and labour markets, reduced distribution costs, financial interdependencies and improved knowledge of opportunities

within the region.

In the metropolis-hinterland framework, the competitive edge favouring larger markets over time is caused by the monopolization of markets and the formation of decisions. The metropole expropriates surplus from the productive activity it controls, either directly through ownership or indirectly through monopolistic buying power. The dynamic elements of development are partially incorporated in the model. The innovations pursued and the allocation of investment funds are the basis and consequence of economic surplus controlled.

The nature of trade and investment ties, therefore, explains the concentration of economic activity. The neoclassical framework characterizes a developing region as one that: 1) captures the product linkages through the locational orientation of the multiplier-accelerator process; and 2) attracts factors toward it through differential rates of return. Expansion becomes concentrated in a region when differences in production functions or export to domestic product prices perpetuate its relative attractiveness. The nature of the trade and investment ties presumes market exchange of goods and services in a manner which reflects independent determinants of supply and demand.

In contrast, the metropolis-hinterland thesis presumes a monopolistic structure which moulds the trade and investment ties in the monopolists' interests. A developing region therefore: 1) drains the human, capital and natural resources

from other regions; and 2) appropriates the corresponding surplus generated in order to yield more, directing the surplus towards its own requirements. The exploitative nature of the trade and investment ties is thus depicted.

Four major points summarize the contrasting views of the impact of trade and investment ties on the unequal pattern of regional developments. First, the metropolis-hinterland thesis alters the traditional opportunity cost interpretation of investment allocation. Long-run profit expectations of metropolitan interests are not dependent on rates of return alone, especially in the contemporary international economy. Many factors such as the procurement of raw material supplies, control over product and primary input markets, and maximizing the effectiveness of research and development expenditures all influence overall market strategy. Market strategy in turn complicates the neoclassical prediction of investment decisions based on expected rates of return.

Second, because allocative investment decisions are determined by monopolistic market strategy in the metropolis-hinterland model, the degree of concentration is greater than it would be if investments were made according to rates of return only. The resulting inefficiency in the economy is greater than that caused by market imperfections, externalities, and adjustment lags predicted in the neoclassical model. The degree of monopolistic exploitation determines the extent to which investment funds are allocated inappropriately according to the metropolis-hinterland model.

Certain investment opportunities which would be expressed within a competitive market structure would not necessarily yield a similar response in the monopolistic market structure. Thus, the polarization of development would be expected to be less if ownership over the production and distribution network were more evenly distributed.[1] Regional satellites which received a share of the surplus generated within their region equivalent to a competitive market solution would then be able to develop better infrastructure, better intraregional transportation and communication, and diversify enough to lessen the detrimental impact of external, de-stabilizing shifts in economic activity

Third, the distribution of gains from trade are interpreted differently by the two models. According to the neoclassical approach, two specializing regions will both gain from trade through the expansion of the production possibilities curve although the share of the gains will be reduced in the less advanced region over time. The cumulative impact of differences in income elasticities of demand and the technological bias in favour of manufactured products will favour the diversified region increasingly. The differential impact will be increased as markets are broadened by increasing economies of scale and decreasing transportation

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1. The monopolistic nature of the national and world market or commercial network requires a deeper examination than possible here. Like many organizations, it would seem that Frank's conception maintains the general rule that the whole is greater than the sum of its parts--that there is some qualitative distinction--but it is difficult to evaluate this conception in relation to traditional industrial organization theory.

costs. In contrast, unless the two regions are competing metropoles with comparable innovative capacity, the metropolis-hinterland thesis predicts that both cannot gain from trade because of their dominant-dependent relationship. Beyond the reduced participation of the rural-staple region, its income-generating capacity and adaptive ability is reduced.

Finally, the two theories predict different implications for social welfare maximization. According to the metropolis-hinterland thesis, the actual and potential economic surplus of a satellite region is reduced by the exploitative nature of the trade and investment ties. Furthermore, surplus absorption is becoming increasingly difficult for advanced economies because of the existing distribution of income.[1] In other words, social welfare is substantively reduced by these ties. The neoclassical analysis, on the other hand, implies that it is enhanced through the expansion of the production possibilities frontier.

These arguments are based on different viewpoints of social welfare. The size and utilization of surplus affects present and future social well-being in the metropolis-hinterland thesis. Equity considerations are directly relevant to the socialist viewpoint underlying this approach. The efficiency orientation of neoclassical theory expresses that social welfare is maximized for any given distribution of resource ownership, whenever returns to homogenous factors

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[1] See Weisskopf; Reynolds et al, pp. 123-130.

are equalized. However, if ownership of these resources affects the returns realized, social optimality cannot be determined in this framework.

In sum, both frameworks predict the differentiation of economic activity into rural-staple and urban-industrial regions. The neoclassical approach seems to describe rather than explain the increasing concentration of economic activity. This is a result of the passive manner in which forces of economic change are incorporated into the model. The metropolis-hinterland thesis provides a plausible explanation. The implications of the two models, with respect to how investment is allocated, the extent of concentration, the distribution of gains, and social welfare in general, diverge. So far, however, there is little indication that the predictions concerning the observed trends vary significantly, despite differences in the underlying behavioural assumptions of the models.

In this section, therefore, we have examined the differing arguments provided by the two models concerning the extent of regional participation in the development of the national economy. We have tried to differentiate both the model predictions and implications of the following enquiries: 1) how the initial separation of regions according to structural-functional characteristics is determined; and 2) why economic activity becomes increasingly concentrated in the urban-industrial region such as Ontario.

The two theoretical explanations diverge significantly

on such dynamic aspects as the reasons for increasing concentration in the urban-industrial region. Thus, it is important to look at the dynamic process of regional development in more detail now that the general points about regional specialization have been made. The mechanisms underlying the general trends predicted, and discussed above, require a closer examination. The development of the urban-industrial region needs to be further examined along with the diminishing participation of the rural-staple region since both result from the same process. Moreover, the national economy's role within the international setting needs further consideration beyond the initial establishment of separate regions. Our examination of the process of regional adaptation should help to explain why some regions grow and others decline. It should thus sharpen our understanding of the regional dimensions of development including the increasing concentration of economic activity.

Regional Adaptation

In 1939 S.A. Saunders, an authority on the Maritime economy, made the following observation:

> "During the past three-quarters of a century, technical changes in both industry and trade have meant painful readjustments for the Maritimes as contrasted with rapid development in other provinces."[1]

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1. Saunders, p. 175

The immediate question then becomes, in short, why? Why did one region experience painful readjustment while others, particularly Ontario, experienced development? Furthermore, what was the nature of readjustment which did take place?

The 'process' of regional adaptation examined by the alternative theories is primarily a function of the perspective and focus of the theory involved. Adaptation is basically a passive procedure in the neoclassical framework. The dynamic elements are taken as given changes which yield disequilibrating forces. These forces shift the equilibrium position to a new position. On the contrary, the nature of adaptation is an active part of the metropolis-hinterland thesis. The dynamic impetus to change is incorporated in the spatial framework.

We begin our analysis of adaptation with the assertion that innovation is the fundamental force of change in economic activity over time. According to A.P. Usher, the basis of innovation is an act of insight beyond skill which is "induced by the conscious perception of an unsatisfactory gap in knowledge or mode of action."[1] The first requirement of innovation is the perception of unsatisfactory gaps between actual and potential organization of production. Then,

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1. A.P. Usher, "Technical Change and Capital Formation", Capital Formation and Economic Growth; National Bureau of Economic Research (Princeton University Press; Princeton: 1955) p. 523; as cited in Vernon Ruttan, "Usher and Schumpeter on Invention, Innovation, and Technological Change", Quarterly Journal of Economics, LXXIII, (November 1955) p. 600.

society must be able to mobilize resources in order to remove the technological and institutional inadequacies perceived. Therefore, the existing organization must bring together those who percieve the gap and those who control the resources necessary to be mobilized. The explanatory effectiveness of theory is enhanced when the resource requirements (human, capital, material and financial) and who controls these resources are properly specified.

We define innovative capacity as the ability to initiate change. There are several factors contributing to innovative capacity. Entrepreneurship is basic. Beyond entrepreneurial talent, financial resources must be available. Thus, financial institutions which can mobilize savings when and where necessary improve regional innovative capacity. A larger and qualitatively broader input mix is also beneficial. This encourages an easier reallocation of factors of production when change is implemented. In addition, marketing expertise enhances the innovation process.

The basic neoclassical framework takes the factors determining innovative capacity as perfectly elastic in supply.[1] Subsequent shifts in demand and supply lead to growth generating and degenerating forces within a region

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1. M. Blang discusses the value of the neoclassical framework 'for organizing our knowledge of technical progress' even though many important questions involving innovation have been neglected. He states: "a survey of the literature on technical change suggests the potentialities of orthodox theory....have not been exhausted", The Economics of Technical Change, Nathan Rosenberg, ed., (Penguin Books Ltd.; Harmondsworth, England), p. 110

out of equilibrium. While the adjustment 'process' from past to present opportunities is accurately described, the process which initiated the change in the first place is not analyzed. Thus, a region's ability to respond or adapt to forces of change depends on environmental factors. The causation does not run the other direction.

The most that is said by a neoclassicist when examining the differential adaptability of regions is that an urban-industrial centre provides a conducive setting for innovation while a rural-staple region deters local initiative. Even so, neoclassical analysis delineates the resource requirements more thoroughly than the metropolis-hinterland thesis. It analyzes the main factors of growth: increases in productivity and augmentation of primary inputs through capital accumulation or population growth and immigration. For example, the export base theory predicts the resource requirements for further development of a satellite. The comparative advantage of exportable commodities should be strengthened and/or the industrial structure needs to be diversified. The export base theory does not explain how one region can implement such changes and another cannot.

The metropolis-hinterland thesis may be used to explain the basis for differential regional adaptability in terms of innovative capacity. The urban-industrial centre is developed because of the indigenous entrepreneurial initiative therein. It is not merely a region conducive to innovation, but one which attracts and concentrates innovative capacity through

conscious development decisions based on market strategy. The rural-staple region does not lack local initiative because of any inherent limitations, but because its growth has been directed by monopolistic interests which limit access to local savings and surplus. Moreover, once structural change in the hinterland is inhibited, then future generation of surplus is reduced. Thus, the metropolis-hinterland thesis explains the presence of innovative capacity in the urban-industrial region and the absence of innovative capacity in the satellite. It analyzes the underlying process of regional adaptation more thoroughly than neoclassical analysis.

Neoclassical analysis can explain regional differences in structure and function or relative factor prices. The explanations are limited to the extent that the conditions assumed are correlated with the dynamic forces determining income generating capacity, the structure of economic activity and economic growth within the spatial context. For instance, the explanatory effectiveness of a factor price and migratory adjustment model, such as Borts provides, is very conditional. The conditions or assumptions necessary to yield predictions concerning regional income differentials describing observed trends are specific. The model specifications are not easily generalized. If different problems are studied, or if different predictions are expected, then the neoclassical explanation requires reformulation. The structural and behavioural parameters describing the relevant conditions

are reformulated according to other seemingly correlated conditions even though the underlying utility-maximizing or profit-maximizing assumptions remain the same.

Most importantly, then, traditional neoclassical analysis does not explain what forces lead to the conditions assumed to prevail. It yields no explanation of why differences in production capabilities and income generating capacity exist. Within traditional theory the best explanation for different functional-structural features and consequent income generating capacity among regions is derived from classical literature concerning obstacles to growth. The existence of proximate causes of growth in some regions and not in others indicates that underlying causes separate the growth potential of regions.[1] The underlying causes are apparently non-economic in origin but economic in effect.

Thus, while traditional theories explain how regional growth and decline evolve, Frank claims to have an explanation of why growth generating and degenerating forces exist. For instance, Frank explains why an underdeveloped region has a poor 'reallocative ability'. The metropolis-hinterland thesis tries to rid itself of the tautological trap that a region has a poor reallocative ability because the infrastructure and complementary production facilities are missing. According to Frank, the supportive goods and services are missing because they are provided by the advanced economies.

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1. See above Chapter Two, p. 33

The underdevelopment of the hinterland economy is functionally related to the development of the metropole. Thus, while trade may have contributed to the growth of the satellite staple-export region during some periods; that growth is neither self-sustaining nor accompanied by structural change yielding development. Determination of the division of labour according to the metropolis-hinterland thesis thus polarizes development between regions. Any apparent harmony of interest is consequently superficial. 'Harmony' is maintained only as long as the metropolis can successfully introduce products which require hinterland exports while the satellite maintains a competitive supply of the materials demanded.

One of the most valuable contributions of the metropolis-hinterland approach is the prediction that gains from growth and gains from trade conflict in the rural-staple satellite region. Perhaps a contemporary example can illustrate the point best. The development of conventional oil reserves in Alberta was basically monopolized through foreign investment. The spin off effects in terms of income, employment, decision-making and economic activity in general were effectively 'truncated'.[1]

In neoclassical analysis, truncation would be expressed by an urban-industrial location of additional economic activity generated by investment in the rural-staple region.

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1. See Herbert Gray, A Citizen's Guide to the Gray Report, Prepared by the editors of The Canadian Forum, (New Press; Toronto: 1971) p. 17.

Frank would contend that neoclassical theory does not examine why the locational linkage is not captured by the rural-staple region in conjunction with forward and backward production linkages. Frank is partially incorrect on this point. We have noted that neoclassical theory does explain, from a technical point of view, why the market pull of the metropolis has concentrated the highest stages of production.

What is more important, however, is the impact of truncation on future development potential of the rural-staple region. The crucial question is whether indigenous developments would be able to exploit new resource opportunities such as the Athabasca tar sands once they become a viable alternative to the diminishing conventional reserves. Traditional theory would answer yes since factor mobility is presumed. If Alberta gains a comparative advantage in this particular energy resource, there should be no reason why the region could not reallocate existing capital and labour to respond to the new expected returns (unless there are underlying causes inhibiting reallocative ability).

In contrast, the metropolis-hinterland thesis would predict that Alberta would not be able to adapt to forces of change which increased the relative economic importance of the tar sands. Alberta could not initiate development <u>without again</u> soliciting foreign capital, technology, and entrepreneurship (embodied in Great Canadian Oil Sands, Syncrude and other consortia). Alberta lacks the innovative capacity necessary for present and future responses to new

opportunities because it did not develop past opportunities indigenously. The financial resources, the entrepreneurial talents, the highest level of decision-making skills are all missing ingredients. This is the very essence of the continuing dependence predicted by the metropolis-hinterland thesis. Thus, even though Alberta has experienced regional growth this growth is not self-sustaining. Moreover, other than limited diversification in industrial structure around the export base, Alberta has experienced no substantial development.

The foreign investment in Alberta's oil industry was based in the world metropole, the United States mainly, and not the national metropole, Ontario. This fact raises an important point concerning the regional dimensions of national development. When the national economy is an hinterland to the world metropole, then the significant consideration is how internal extraction is linked to the world market system.

The locus of key decisions will shift away from the national urban-industrial centre towards the world metropole. The extent to which industrialization and development continues in the national metropole depends on its degree of independence. Such autonomy would reflect the ability to <u>initiate</u> changes in economic activity rather than mere <u>responses</u> to initial shifts. Differences between so-called industrialized underdeveloped economies and typical underdeveloped economies (such as Canada and Chile, respectively)

may be partially explained by differences in degree of independence of the capitalist class and the operative functions involved. In either case, the staple export region would become more dependent and underdeveloped when the national economy is open to foreign investment, exploitation of resources, and expatriation of surplus.

Whether or not the linkage between the world metropole and regional satellite is direct or through the national metropole is not particularly important to the growth of the regional satellite though it may affect the national metropole. Its development relative to other regions may diminish if it becomes a less important 'centre of intercourse' between the polarization of regional development and the satellization of the entire economy.[1] In addition, the metropolis-hinterland thesis perceives that the integration of the national economy into the world metropole is intensifying. The relative independence of the national metropole would therefore be expected to decline.[2]

When we look at several regions within an hinterland economy, we should distinguish between two satellites on the same metropolis-satellite chain and two satellites along

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1. See Frank, Underdevelopment or Revolution, pp. 5-6

2. Aitken contends that Canada's independence reached a peak during World War Two. Since that time the increasing degree of foreign ownership has moulded development in a fashion which has increased Canada's dependence on foreign capital and product markets. Yet, Canada never was a leading metropole. Aitken, Deutsch et al, op. cit.

different chains extending from the same metropole. In the first case, the relative polarization of development is an obvious consequence of the particular relationship between the two regions--which one is the satellite to the other. The second case requires a more detailed consideration.

Presumably, the relative position of two satellites on different chains depends on the size and utilization of surplus which the indigenous elite maintains instead of channeling toward the metropole. What determines this regional share? Is the regional share determined by the production technique applied, or the organization of production? If the development decisions of the indigenous capitalist class are so important, what patterns these decisions? What specifies the degree of competitiveness or monopolization of markets among regions? What limits the region's 'freedom' to utilize its own surplus--the extent of freedom from foreign domination? It is when these kinds of questions are raised that one begins to sense that the basic process of institutional and technical advance remains unspecified even in the metropolis-hinterland model.

The metropolis-hinterland determination of why the network evolved is necessary, but insufficient for understanding the spatial-temporal context of development. The nature of the actual process of technological and institutional advance is not specified. According to Neill, for instance, Innis indicated that costless technological and

institutional advances of society create the economic surplus.[1] There is no comparable analysis in Frank's work. If, however, the costless aspect is interpreted in terms of the cost reducing effect of innovations, then we may infer how the profit portion of surplus--the difference between revenues and costs of production to society--is generated. The returns to factors and costs of production, in addition to price valuations of commodities, will be a function of the technological and institutional advances of society.

We contend that objective development is an innovative process in which perception and mobilization of resource requirements is fundamental. Innovative capacity is strengthened whenever human, capital, material and financial resources are channeled together. Thus, the metropolis-hinterland thesis is better able to examine the cause-effect relationships which induce the presence or absence of development forces in a region. Again, however, beyond the monopolistic control and impetus to innovation, the metropolis-hinterland thesis does not predict the specific costs and revenues within the production process which shape the allocation of surplus and, ultimately, the size and utilization of surplus over time and space.

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1. Robin Neill, A new theory of value/The Canadian economics, H.A. Innis, University of Toronto Press; Toronto: 1972) p. 81. It should be emphasized that Innis views the actual process of technological and institutional advances as indeterminant although after the fact it may be analyzed.

In sum, the alternative analytical frameworks explicate different aspects of the developmental process. Neoclassical theory examines the resource requirements of an industry, sector, region or national economy more thoroughly. It provides a better understanding of the production process from an economic, procedural viewpoint. However, only the results of innovation are examined rather than the economic forces inducing, encouraging or permitting innovation to occur. Further extensions and reinterpretations of the neoclassical framework would be necessary if one wants to understand the spatial-dynamic context of development.

Frank's model defines who controls the resources to be mobilized. Their general resource requirements depend on the innovations pursued. Frank's model seems to provide a better overview of the historical process. It provides a better basis for understanding the growth and decline of regions.

Key Distinctions and Policy Implications

Our review of the neoclassical and metropolis-hinterland frameworks has suggested several key distinctions in perspective which underlie the analysis. It is now possible to summarize these contrasting features. We may then illustrate how such fundamental theoretical viewpoints lead to alternative policy implications.

First, neoclassical theorists interpret the price system as a properly functioning allocative mechanism reflecting conditions of demand and supply, or where it is not, recommend how market imperfections alter the equilibrium solution. Metropolis-hinterland theorists, as socialists, emphasize the importance of ownership or control of the means of production and the market. Economic power based on such control is an important determinant of the production and consumption of commodities.

Second, the neoclassical school ignores, and effectively denies the existence of, surplus. Surplus, for instance, would be the legitimate return to the owners of capital. Investment depends on the redirection of savings based on the returns of earlier investments instead of wasteful consumption. The role of saving and investment is fundamental to capital accumulation, and therefore increased labour productivity, income and consumption demand. Socialist theoreticians define surplus as the difference between total production and the (socially necessary) costs of producing such output. Creation and allocation of surplus is central to the growth process. Control over the means of production and markets determines access to the surplus generated and the future spatial configuration of growth and development forces.

Third, supply and demand forces are veiwed as basically independent in the neoclassical conception of the market economy. Factors which shift supply or demand will expand

the economy and thus shape the map of economic activity. Demand and supply are mutually determined by the monopolistic forces in the metropolis-hinterland thesis.

Finally, concern over equilibrium, even in a dynamic context, has caused neoclassicists to relegate what socialists consider to be crucial elements of the historical process to peripheral constructs. For example, market imperfections and externalities alter equilibrium solutions, but are not central to the analysis. In the metropolis-hinterland model, the monopolistic and interdependent market structure determines the prices and quantities of factors and commodities exchanged. Imperfections and externalities are therefore central to the metropolis-hinterland solution.

We may illustrate these key distinctions by examining how the alternative viewpoints might alter the dynamic predictions. The alternate predictions about the process of regional adaptation stem from the opposing viewpoints of the nature of integration.[1] As the national economy develops, the economic activity of the participating regions is expected to become more integrated or interdependent. Our usage of the term 'integration' implies access to capital, commodities, and services. In addition, knowledge of investment, buying

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1. We are not refering to the formal meaning of economic integration. We do not confine the term to deliberate policy action designed to regulate relations among regions although public policy contributes to the existing functional-structural relations among regions along with private decisions.

and selling opportunities is basic. In other words, we have in mind the familiar notion of competitive markets as applied to the spatial context. Interregional mobility of goods and factors should reduce any barriers to entry induced by the constraints of space. An integrated transportation and communication system removes transactional and informational barriers. A national market increases the number of potential buyers and sellers such that local monopolies should be reduced and regional competition induced. Of course, it also permits a few producers to monopolize the production and distribution of goods and services.

The nature of integration in the neoclassical model is basically competitive.[1] It is monopolistic within the metropolis-hinterland model. These different interpretations explain why the models' conceptions of the nature and extent of regional participation are antithetical.

Neoclassical theory explains that manufacturing investment in the rural-staple region is difficult to attract since the regional market is small, savings are low, infrastructure is poor, productivity is low and information is reduced. The rural-staple region is therefore perceived as relatively <u>isolated</u> from the mainstream of economic activity.

In contrast, the metropolis-hinterland thesis perceives

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[1] This is not to say that certain industries or sectors are not monopolistic. The overall nature of the market, however, reflects a competition among many buyers (and sellers) for scarce products, resources, and investment funds, (or the highest return possible) whose allocation, in aggregate, is not predetermined by a small group of individuals.

the rural-staple region as an <u>integral</u> part of the entire system. The limited extent of regional participation is the result of the specific nature of interdependency. The dominant-dependent relationships are defined by the surplus-appropriation chain. Satellite participation is limited because of the inaccessibility to actual economic surplus, savings and investment funds; and the inability to generate more surplus because of its continued dependence on primary products.

What the neoclassical model views as a <u>cause</u> of underdevelopment--poor infrastructure, lack of entrepreneurship and investment opportunities-- the metropolis-hinterland approach considers to be an <u>effect</u>. The latter theory seems more credible in an advanced economy with a fairly integrated transportation and communication system. For instance, such facts as the poor mobility within a rural-staple region despite established infrastructural linkages with other regions are more easily reconciled under the metropolis-hinterland interpretation.

Differences in policy implications are thus derived from the key theoretical distinctions of the two approaches. The alternative models perceive different consequences of the relations and separations of regions. Therefore, individual recommendations will reflect the analytical framework one applies.

The neoclassical framework contends that there are overall gains from specialization. Since concentration of

economic activity is most profitable and efficient, then welfare is maximized. Neoclassical theory would therefore encourage the concentration of output unless the economies of scale and external economies are outweighed by comparable diseconomies. If market forces go beyond a degree of inequity deemed acceptable, then neoclassical theory would encourage some dispersal of economic activity.

Policy could correct for such detrimental effects of specialization as poor reallocative ability in the rural-staple region by encouraging private investment from outside the region. To attract foreign capital the region would need to improve infrastructure and perhaps implement incentive programmes. These policies would minimize the locational disadvantages of the region.

Laissez-faire policy is accepted in principle. Policy is therefore confined to correcting for the divergence between private and public advantage wherever politically feasible. Governments are expected to merely correct for market imperfections. Then the beneficial impact of growth should become more diffused throughout the economy when external benefits are acquired and external costs are removed.

The policies recommended by metropolis-hinterland theorists are substantially different from those outlined above. Development and underdevelopment are perceived as relational and qualitative. Since both are products of the evolving institutional framework of the world market, the main recommendation would require essential changes in the

entire capitalist system.

Concentration of economic activity is criticized because it reflects the inherently inequitable system of the expropriation of surplus from the direct producer. This surplus is appropriated according to the needs of a few controlling interests located in the metropole. Thus, surplus is created which could be applied to the development of the rural-staple region, but it is appropriated by the metropole.

Soliciting more foreign capital leads to further alienation of resources and continuing dependence. Satellite development potential is reduced not improved as neoclassicists would suppose. The rural-staple region will find increasing difficulty in its attempt to diversify. Thus, metropolis-hinterland theorists would recommend the curtailment of future capital inflows from abroad, or at least a shift in the relationship such that these inflows would no longer generate greater outflows.

Furthermore, attracting foreign capital will stultify any indigenous entrepreneurial initiative. To metropolis-hinterland theorists, development requires more than growth and structural change. The ability to initiate change is also important. Therefore, the institutional framework should be altered so that savings and other resources are accessible to indigenous entrepreneurs. These resources should not be alienated as they have been in the past.

Conclusions

We are presently not prepared to reject either theoretical approach since both contribute to our understanding of regional development, but have obvious limitations. Without further historical, theoretical and quantitative analysis, acceptance or rejection of one theory or the other would depend basically on ideological differences. While these differences will determine the intellectual pursuits of individual economists, the choice of one approach over the other has not been resolved in general nor by this particular study.

We do, however, reject the neoclassical scenario outlined in Chapter Two. The metropolis-hinterland framework, by contrast, has provided a better understanding of the dynamic forces of growth and structural change. It therefore provides better predictions with respect to long-run regional development and underdevelopment.

We wanted to understand the regional dimensions of development such as the nature and extent of regional participation, the economic separations and relations among regions, and adaptation within the national economy. The historical perspective and institutional conception of the market in the metropolis-hinterland model improves its explanatory effectiveness. While proper application of the model requires more historical detail and greater theoretical specification, fundamental changes in the analysis do not seem necessary.

Therefore, for our purposes, the metropolis-hinterland approach is more valuable.

A significant issue raised earlier, concerning the neoclassical approach, was not resolved. Some economists contend that neoclassical analysis of regional development could be strengthened. Refinements presently at the theoretical frontier, could be included in regional analysis. The explanatory power of this approach would be evident once these theoretical developments are applied.

Such fundamental notions of value, utility, scarcity and welfare (inherited from the moral philosophers and further developed by the neoclassicists) are applicable to nonmarket or 'imperfect' market situations. If, for example, economic power could be logically incorporated into the model, then much of the apparent impetus of economic change would become a central part of the analysis. Thus, some economists would contend that the neoclassical approach could correctly predict and interpret the basic process of regional adaptation, beyond factor reallocation adjustments, when the forces which initiate change are incorporated.

Critics maintain that the modifications required are more fundamental. Accordingly, recognition, acknowledgement, and analysis of historically important institutional forces cannot be included in the model. Furthermore, even if economic power, for instance, were incorporated in the model, the way it would be explicated would still limit the explanatory effectiveness with respect to the dynamic process of regional

development.

The concept of economic power would significantly alter price theory and the theory of income distribution. Whether economic power is depicted by traditional cost-revenue analysis or the concept of surplus, the explanatory effectiveness of the analysis would be enhanced. Yet, the analysis has been inimical to the concept of surplus in the past. The question thus becomes: is the concept of surplus fundamental to our understanding of economic power? Therefore, if surplus is important, then there will be serious limitations on the usefulness of the neoclassical analysis to the extent that surplus is beyond the focus of the approach.

The question of which approach to use in future research reflects the continuing quandary about the nature and extent of regional development itself. It is ironic that a valuable way to conclude is to interpose several questions for further research. However, despite our ability to specify the different contributions of the two approaches, there are indeed many unresolved issues. For instance, given the observed trends and theoretical interpretations, will future national development tend to be more polarized or more diffused among regions? North argues:

> "We may expect, therefore, that the differences between regions will become less marked, that secondary industry will tend to be more equalized, and indeed in economic terms that regionalism will tend to disappear."[1]

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1. North, Friedmann & Alonso, p. 254.

Is his contention valid? Is it not more realistic to expect that regionalism will continue unless marked institutional changes become evident?

Another issue involves the apparent ineffectiveness of current policy. Is policy inadequate or inappropriate? Are the government policies merely insufficient, and would more of the same policies eliminate many of the development problems facing the various regions? Is it not better to view the problem in terms of misguided policies which may even exacerbate existing problems?

Finally, it is necessary to decide whether underdevelopment is caused by the *relative isolation* of certain areas or by the *integration* of these areas in some dominant-dependent relationship. Is regional participation inhibited by the absence of market forces or by the absence of competition within the national economy? In other words, is the organization and functioning of competitive market forces ineffective in peripheral areas because of structural and behavioural deficiencies of the region itself? Is it not more correct to view such deficiencies as symptomatic of the monopolization of markets which change the nature of regional competition altogether?

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